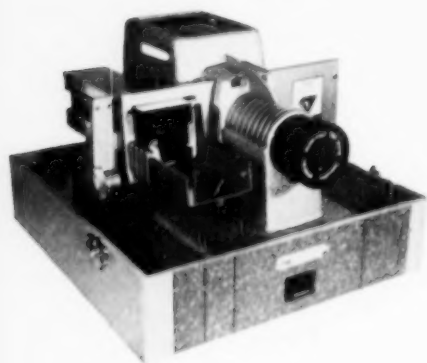


# Consumers' Research BULLETIN



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# CONSUMERS' RESEARCH BULLETIN

WASHINGTON, NEW JERSEY

THE MAGAZINE THAT GUIDES CONSUMER BUYING

JANUARY 1957 • VOL. 39 • NO. 1

## What's in this issue

### Automatic washing machines

5

Fourteen brands and models rated, including Bendix, Easy, Frigidaire, Kelvinator, Kenmore, Maytag, Norge, Philco, RCA Whirlpool, Speed Queen, Westinghouse

### Washer dryer combinations

Five brands, including Easy, General Electric, Kenmore, Norge, Westinghouse

### Repainting

It can be done too often

### Slide projectors

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W. Otis Fitchett

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Safety aspects of these and other cars

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Reports on five additional 1957 models

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## Off the editor's chest

JUST ASK any homemaker what difficulties she is having in getting her household appliances serviced efficiently, and you are likely to open

# WAVY

As a rule, most companies provide for supplying free of charge the parts needed for repair or replacement for one year from date  
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# The Consumers' Observation Post

AUTOMOBILE SEAT BELTS HAVE ONLY A LIMITED VALUE in preventing injury in car crashes and collisions. In fact, one expert has established the fact that a seat belt in many cases is likely to be a cause of injury or death in an automobile accident. In a series of crash tests in September and October 1956, Andrew J. White, director of Motor Vehicle Research, demonstrated with dummies, held by seat belts and in one case by a shoulder harness, that in a collision at speeds of only about 12 miles per hour the harness pulled loose and the dummy smacked his head against the windshield. In still another case at the 12-mile speed, the dummy slid forward striking his knees sharply against the dash and "breaking" both hands. In the light there will be much emphasis on automobiles, for safety in auto-improvements and changes. It calls for changes.

RD has been advertised by John A. Pa., with a guarantee of a life and the guarantee on five weaves in including a carved Wilton, a wool viscose-nylon, and a "hi-pile" plush. These can do also. Consumers should note of life expectancy the next purchase.

# PAGES

stability, should not be allowed. Foods are more susceptible than to improper temperature control; some kind of "defrost indicator" on timer on notice, according to Dr. General Experiment Station. In a symposium by the Army Quartermaster Corps, the rapidly increasing use of a variety of those with sauces and gravies at the proper temperature, an inexperienced in each package by the processing time the temperature has gone down of the product. The consumer finds it not nearly so tasty as appear is not likely to give it a package had been improperly stored and consumer would at present have no way

of knowing.

\*\*\*

IF YOU BUY YOUR KODACHROME FILM ABROAD, you can get it with the cost of processing included in the price, according to the convenient arrangement that was available in the U.S. before the Department of Justice obtained a consent decree in an antitrust case against Eastman Kodak Company forcing the abolition of this practice. Two CR subscribers report very satisfactory experiences with purchases made abroad and developed in Eastman laboratories overseas, a list of which is available from Eastman Sales Service Division, Rochester 4, N.Y. Color film purchased abroad with the cost of processing included may also be brought back by the returning traveler undeveloped and mailed under the old arrangement to Eastman at Rochester.

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## Off the editor's chest

JUST ASK any homemaker what difficulties she is having in getting her household appliances serviced efficiently, and you are likely to open the floodgates of pent-up grievances. There seems to be a widespread feeling among consumers that it takes too long to get a product repaired or adjusted, the price is too high, or the job is likely not to be satisfactory when it is finished. Consumers complain that servicemen charge too much just to come out and look at a balky automatic washer, refrigerator, or television set, let alone fixing it. On the other hand, repairmen point out that the public in general would like to avoid paying anything at all on the assumption that the manufacturers are at fault in making appliances that don't stay in order.

As more appliances are sold and as they become increasingly complex, the service problem is likely to get worse instead of better. It is important, therefore, that consumers make a firm resolution to study carefully the terms of the warranties that accompany most appliances so that they are aware of what service is provided for what length of time. They will then be in a better position to judge what they are up against after the warranty period is up.

Most warranties on household appliances run for a year. If a warranty registration card comes with your appliance, be sure to fill it out promptly and give it to the dealer or mail it to the manufacturer as directed. In that way you establish the date of purchase so that there can be no dispute about the length of time the appliance has been your property.

As a rule, most companies provide for supplying free of charge the parts needed for repair or replacement for one year from date

(Continued on page 28)

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\* \* \*

CARPET PRICED AT \$9.95 PER SQUARE YARD has been advertised by John Wanamaker department store in Philadelphia, Pa., with a guarantee of a life of seven years. The advertisement offered the guarantee on five weaves in broadloom widths from well-known mills, including a carved Wilton, a wool frieze, textured velvet, chenille-type viscose-nylon, and a "hi-pile" plush weave. What Wanamaker can do, other stores can do also. Consumers should ask the store they deal with for a guarantee of life expectancy the next time they make an important rug or carpet purchase.

\* \* \*

FROZEN FOODS, for both health and palatability, should not be allowed to melt and then refreeze. Some frozen foods are more susceptible than others to deterioration and spoilage due to improper temperature control; hence it would be very helpful to have some kind of "defrost indicator" on packages of frozen foods to put the consumer on notice, according to Dr. Z. I. Kertesz of New York State Agricultural Experiment Station. In a symposium on precooked frozen foods sponsored by the Army Quartermaster Corps, Dr. Kertesz pointed out that in view of the rapidly increasing use of a wide variety of frozen dishes, particularly those with sauces and gravies that are adversely affected if not kept at the proper temperature, an inexpensive indicator is needed that can be placed in each package by the processor to show the purchaser whether at any time the temperature has gone too high and so has permitted deterioration of the product. The consumer who tries a fancy dish in frozen form and finds it not nearly so tasty as the picture on the container makes it appear is not likely to give it a second try. Perhaps this particular package had been improperly stored and lost its distinctive flavor, but the consumer would at present have no way of knowing.

\* \* \*

IF YOU BUY YOUR KODACHROME FILM ABROAD, you can get it with the cost of processing included in the price, according to the convenient arrangement that was available in the U.S. before the Department of Justice obtained a consent decree in an antitrust case against Eastman Kodak Company forcing the abolition of this practice. Two CR subscribers report very satisfactory experiences with purchases made abroad and developed in Eastman laboratories overseas, a list of which is available from Eastman Sales Service Division, Rochester 4, N.Y. Color film purchased abroad with the cost of processing included may also be brought back by the returning traveler undeveloped and mailed under the old arrangement to Eastman at Rochester.

INCREASING USE OF ATOMIC ENERGY and the subsequent hazards involved in exposure of large numbers of people to ionizing radiation have received wide publicity of late. The biological effects have been evaluated by experts in the field whose findings appear in two reports published by the National Academy of Sciences. As an editorial in the Journal of the American Medical Association has pointed out, radioactive fall-out from testing atomic weapons presents the possibility of a small, but significant, amount of exposure as compared with that from diagnostic X-ray. From the genetic point of view, there is no such thing as a safe level of exposure because all ionizing radiation from any source is potentially dangerous to the reproductive processes and to progeny. It is therefore particularly important that the use of diagnostic X-ray be held to a minimum; that shielding precautions be strictly observed, particularly for people under 30 years of age; and that a system be set up whereby every person keeps a complete record of his exposure to X-rays throughout his lifetime. Some idea of the dangers involved can be secured from a study by Dr. Shields Warren of Boston who analyzed the deaths of some 82 thousand physicians in the period 1930 through 1954 and found that radiologists died on the average 5.2 years earlier than other physicians.

\* \* \*

SOMETHING NEW IN TOURING SERVICE has made its appearance in France. Fleet News reports that the Touring Club of France has set up a system for getting a message to motorists on the road. On huge roadside panels are posted the name and license number of the driver to whom someone has sent an "autogram" mailed at any postoffice in France, Western Germany, or the Netherlands. When the sought-after driver sees the sign, he drives into the nearest Esso station to obtain the name and telephone number of the person who is trying to reach him. This technique would be quite effective on U. S. turnpikes and throughways.

\* \* \*

CAKE MIXES ARE A VERY POPULAR PRODUCT, but the manufacturers complain that there is little or no profit in them. Of the 50 manufacturers listed by the millers' trade association in 1955, a number are believed to have fallen by the wayside in 1956. About two thirds of the 568 million packages sold per year are claimed by two firms, General Mills and Pillsbury. Procter & Gamble has entered the field by purchasing the Duncan Hines line. With all the competition for the homemaker's favor, she is likely to save money by buying a mix. If General Mills' calculations are accurate, it will cost the home cake maker 47 to 51 cents to make a white, yellow, or devil's food cake at home (more if she uses special cake flour and butter). Using a Betty Crocker mix at 35 cents, the total cost for a cake is figured at something like 45 cents. The view generally held in the trade is that the ordinary cake eater can't tell the difference between a cake made from a mix and one that is prepared from scratch.

\* \* \*

INVESTIGATION OF EATING HABITS is one of the first steps to be taken by a physician in determining the cause of urinary tract calculi (kidney and bladder stones), advise Dr. L. Douglas Atherton and Dr. Lytle Atherton of Louisville, Kentucky. In all cases where calcium intake is excessive or even moderate, doctors recommend restriction of milk and cheese in the diet. Recurrence can often be prevented by correction of recognized causes.

\* \* \*

THOSE NEW 1957 AUTOMOBILES were hitting some manufacturing snags in their early production schedules late last year. Some of the problems, according to The Wall Street Journal, were body panels that didn't fit; frames that weren't the right size; and dies that had to be re-engineered. Some factories were having labor troubles. All of which adds up to the possibility that consumers who are eager to buy the first cars off the assembly line may find that the "bugs" have not all been worked out. The shrewd purchaser who can do so will wait until everything is running smoothly, before he signs on the dotted line for a car, particularly at this year's increased prices.

(The continuation of this section is on page 33)



## **Automatic washing machines and washer-dryer combinations**

### **Automatic washing machines**

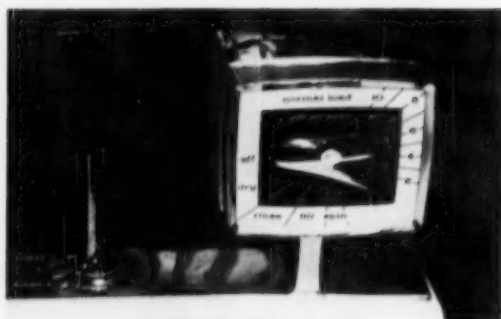
If your automatic washing machine is seven to ten years old, the chances are good that you are contemplating buying a new one now or in the near future. In general, the first era of automatic washing machines has ended and another is just beginning. Already manufacturers are thinking and talking in terms of the "laundry" and not of single units such as the washing machine or the dryer. Plans for the home laundry of tomorrow include appliances either as separate units or as combinations plus bins to hold soiled and washed clothes.

The automatic washing machine has changed little in basic design over the past ten years. The buyer can still choose between a front-loading, revolving-cylinder, tumble-action washer, or a top-loading, vertical-tub, agitator model, but the newer washing machines are more flexible than the earlier models were. The newer machines not only go through a complete wash-rinse cycle at the turn of a switch, but permit the operator to repeat or skip any portion of a cycle. In addition, some machines have water-saving

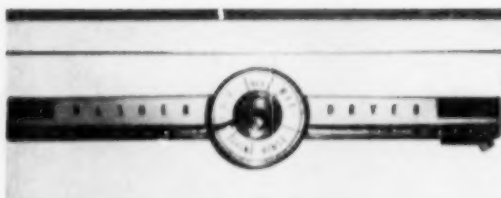
devices to control the amount of water used for each wash according to size and type of wash load. Many of the washers are provided with dual controls to operate two separate and distinct wash cycles, one for the washing of ordinary clothing and bed and table linen, and one for fine fabrics and those made of synthetic fibers. On some machines, the agitators for washing and the tubs for spinning run slower on the short cycle. One also has the choice of using either cold or warm or hot water for washing. Load-balancing and protective switches are more common on today's washers, and machines no longer have to be bolted down. Most leading home laundry equipment makers now have at least three models, to meet the needs of various income groups.

### **Washer types**

There are basically two types of automatic washing machines, those using a tumbling or rotating cylinder and those using an agitator. Machines using the tumbling or rotating cylinder or drum have the door on the front of the cabinet and, generally, the door is hinged at one side. This



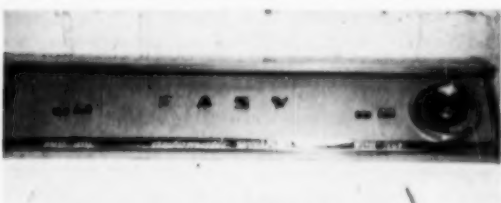
*Frigidaire Model WDU-57*



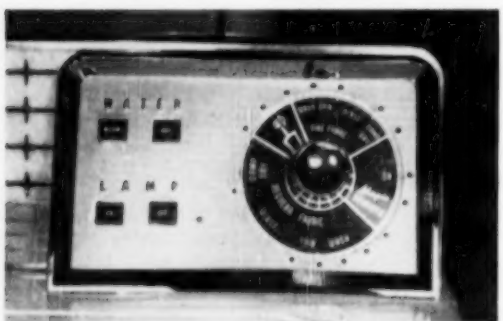
*Easy Washer-Dryer Model CDF*



*RCA Whirlpool Combination Washer-Dryer Model W5710500*



*Easy Spirulator Model ADF*



*Kelvinator Model WAG6*

arrangement has the disadvantage of permitting clothes to drop to the floor when the machine is being loaded or unloaded. On some models of *Westinghouse* machines the doors are hinged at the bottom, hence the door can be used as a shelf.

The tumbling-cylinder washers were the first automatic machines to appear on the market. These machines have a perforated metal cylinder tub which rotates horizontally within an outer tub which holds the wash water. As the cylinder rotates, the baffles or shelves built into the cylinder wall lift and drop the clothes out of and into the moving wash water. Examples of this type of machine are the *Bendix* and *Westinghouse*, and more recently the various washer-dryer combination machines.

Many of today's automatic washers, however, use the oscillating agitator. Centered in a vertical tub, the agitator has a rotary oscillation around a central post. Blades, fins, or vanes keep the clothes in constant floating motion. Washing machines using the oscillating agitator are, among others, the *Easy*, *Maytag*, *Norge*, *Philco*, *Speed Queen*, and *Whirlpool*. The *Frigidaire* and *Kelvinator* automatic washers use different actions. The *Frigidaire* uses a centrally located agitator that pulsates in an up and down motion, circulating water currents from top to bottom of the tub, while the *Kelvinator* uses a vibratory motion.

#### **Tumbling versus agitation**

Consumers frequently ask what difference, if any, there is between the rotating-drum (tumble-action) washer and the vertical-tub (agitator) washer in respect to efficiency in washing.

In tests conducted by Consumers' Research to determine which, if either, had a better washing action, it was found that the two types of actions produced about the same results with a sudsless or controlled-suds synthetic detergent. With an agitator-type washer, however, one can use a detergent which produces suds without the suds interfering with the washing action, and get better results; up to this time CR has not found a sudsless or controlled-suds detergent which cleans as well as the best suds-making detergents. While one can use a detergent that produces suds in a tumbling-cylinder washer, it must be used sparingly; with this restricted use, not enough of the detergent is used to do the

Various laundry appliances have different kinds of controls for providing a selection of water temperatures, agitator speeds, and spin speeds, as is shown in the pictures on pages 6 and 7.



best possible washing job. Herein lies the major difference in washing results obtained in a tumbling-cylinder-type machine as compared to an oscillating-agitator-type machine.

The tumbling-cylinder-type machine has been found superior for washing clothes which have been soiled heavily with sand or mud, as commonly happens with clothes worn by farmers. The cylinder machines are also more satisfactory and convenient to use for washing such items as blankets, quilts, pillows, spreads, and furniture slipcovers.

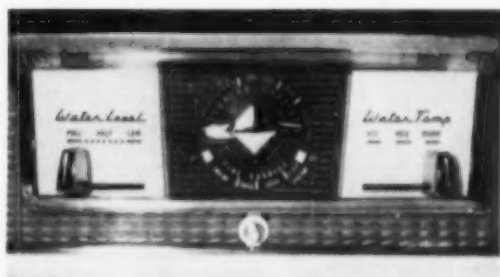
#### Additional features

With some machines, the user may not only do the wash in a shorter cycle, recommended particularly for clothing made of nylon, *Dacron*, and other synthetic fibers but may also wash at a slower agitator speed and spin-dry at a slower rotational speed. The slower speeds are recommended for synthetic fibers, furniture slipcovers, and blankets.

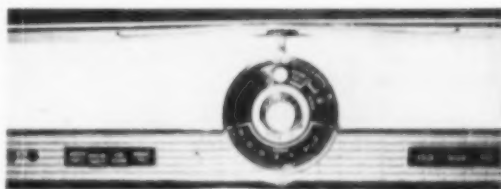
Many of today's washing machines also give the user a choice in the selection of the temperature of water for a given wash, such as the choice between cold, warm, and hot, or warm, medium, and hot. Cold water will be as it comes from the cold-water faucet, with temperature depending upon the locality; warm water will usually be about 100°F; medium will provide water at about 120°F; and the hot will be the temperature of the water supplied by the hot-water line of the home.

Details of agitator speeds and water temperature selections available on the various machines tested are given in the table on pages 8 and 9.

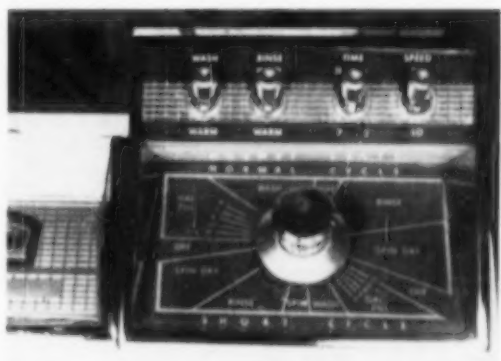
Available on the *Norge* washing machines is a "water conditioner retainer," a container which when attached to the agitator makes it possible to add a chemical water softener to the rinse water without need of the housewife being present during the rinse period. This is a particularly desirable accessory in areas where the water is hard, even when synthetic detergents are used, for even synthetic detergents will wash clothes



*Philco Automatic Deluxe Model W-266*



*Maytag Model 150*



*Speed Queen Multi-Cycle Model A18*



*Norge Model W5-450*



*RCA Whirlpool Imperial Model W5704801*



*Bendix Automatic Washer Model WGG-C*



Brand	Rated capacity, pounds	Type of washing action	Type of water level control	Time for regular cycle, minutes	Time for short cycle, minutes	Water used for regular cycle, gallons		Electricity used for regular cycle, watt-hours
						hot	cold	
Easy ASF	8	Agi.	Time	30	—	13	14	195
Easy Spiralator ADF	8	Agi.	Press.	30	20	18	10	185
Kelvinator WAG6	9	Agi.	Time	34	15	19	11	180
Maytag 140	*	Agi.	Press.	37	—	16	7	150
Norge W5-450	9	Agi.	Time	33	19	21	10	170
Philco Deluxe W-266	9	Agi.	Press.	42	28	20	10	180
RCA Whirlpool Deluxe W5704000	8	Agi.	Press.	37	—	20	13	225
RCA Whirlpool Imperial W5704801	9	Agi.	Press.	41	22	23	10	280
Speed Queen Multi-Cycle A18	**	Agi.	Time	30	20	20	14	230
Westinghouse "Laundromat" L-100	9	Rot. Cyl.	Press.	44	—	16	8	230
Westinghouse "Space-Mate" LH-3	8	Rot. Cyl.	Press.	46	—	13	11	225
Bendix WGG-C	9	Rot. Cyl.	Press.	36	—	16	9	195
Frigidaire WDU-57	8	Vert. Pul.	Time	28	17	17	10	170

\* Manufacturer recommends loading to top row of holes in tub.

\*\* Manufacturer states capacity is "average normal washer load."

† Machine has single hose inlet; see text, page 10.

‡ Not thermostatically controlled; desired temperature must be set manually with faucets.

Agi.—Agitator; Rot. Cyl.—Rotating Cylinder; Vert. Pul.—Vertical Pulsation; Press.—Pressure; Med.—Medium; Norm.—Normal.

better in soft water than in hard water. It is an established fact that, for best results, when the wash water is softened, the rinse water should be softened likewise.

People have asked, from time to time, why cannot some mechanism be added to washing machines which would buzz or produce some audible sound when the machine has completed the cycle, thereby letting the homemaker know that the cycle has ended? Such a device is included on several of the *Whirlpool* machines. A buzzer comes on automatically for two 10-second periods at the end of a cycle.

The problem of lint and its presence in the wash water and on dark clothes after they are washed with white fabrics will continue to plague the housewife. Even though some washing machines incorporate a lint filter, tests by CR indicate that, while such filters do remove lint from the water, they do not remove all the lint, and any piece of dark clothing will still show

traces of lint at the end of the washing job.

### Safety features

One of the most important things connected with a washing machine when installed in a basement or even in a kitchen is that it be grounded adequately to a good ground such as a water pipe or radiator. Unless this is done, there is always a risk involved that someone operating the machine may receive an electric shock, sufficient even to be fatal, should an electrical failure occur within the machine. Such a failure may be a defect in insulation or insulation wearing through and the wire coming in contact with the frame of the machine. Some machines incorporate provisions for grounding the machines through the cold-water hose when the cold-water hose is properly connected. CR would advise, however, that even in such instances a separate ground from the machine to a cold-water pipe should be added, as an extra safeguard.

## WASHERS

Water left in clothes, percent dry weight	Over-all dimensions, inches			Slow speed	Top or front loading	Water-temperature selection		Provisions for partial fill	Brand
	width	height	depth			Wash	Rinse		
82	27	38	26	No	Top	Hot, Warm	Warm	Yes	Easy ASF
78	30	40	25	Yes	Top	Hot, Warm	Warm	Yes	Easy Spiralator ADF
76	25	43	28	No	Top	Hot, Warm	Warm	Yes	Kelvinator WAG6
73	26	43	28	Yes	Top	Hot, Warm, Cold	Warm, Cold	Yes	Maytag 140
70	26	43	27	No	Top	Hot, Warm	Warm, Cold	Yes	Norge W5-450
80	26	43	27	No	Top	Hot, Med., Warm	Warm	Yes	Philco Deluxe W-266
79	25	37	26	No	Top	†	†	No	RCA Whirlpool Deluxe W5704000
75	29	42	27	Yes	Top	Hot, Med., Warm	Warm	Yes	RCA Whirlpool Imperial W5704801
81	26	42	28	Yes	Top	Hot, Warm†	Warm†, Cold	Yes	Speed Queen Multi-Cycle A18
80	31	40	29	No	Front	Hot, Med., Warm	Warm	"Low to High"	Westinghouse "Laundromat" L-100
80	25	36	26	No	Front	Hot, Warm	Warm	No	Westinghouse "Space-Mate" LH-3
80	31	40	28	No	Front	Hot, Med., Warm	Warm, Cool, Cold	Yes	Bendix WGG-C
55	25	43	27	No	Top	Hot, Warm	Warm	Yes	Frigidaire WDU-57

Another safety aspect of washing machines, particularly with regard to the oscillating-agitator-type machines, is a switch on the door or lid to stop the machines at any part of the cycle when the lid is opened. In general, the tumbling-cylinder-type machines, including the washer-dryer combinations, do have provision for stopping the machine when the door is opened. However, not all oscillating-agitator-type machines include this safety feature. There is, of course, some element of danger during the normal agitating cycle, if, for example, a youngster should reach into the tub, but an even greater danger exists while the tub is spinning. With some machines, such as the *Easy* and *Philco* machines, the tub continues to spin for as long as one to two minutes after the machine is shut off. The impatient housewife, for example, who wishes to remove the clothes from the machine at the end of a spin cycle before the tub comes to a complete stop is risking receiving a bruised

hand and possibly even a broken hand, wrist, or arm. A better arrangement, such as is used on the *Maytag*, would be for the entire operation of the machine to stop when the lid is lifted. Some machines permit agitation and water fill but stop the tub when the lid is opened during the spin cycle. On the *Speed Queen*, the lid is locked shut during the spin cycles. Either of these types of safety device could be considered satisfactory. Machines which have no provision at all for preventing accidents in case the lid is opened during operation are considered by CR to be unnecessarily hazardous.

#### Helpful hints

Some lower-priced washers have only a single hose inlet, intended to be attached to a mixing faucet or a Y-connection, making it necessary that the water temperature be controlled by adjusting the hot and cold faucet valves. When the hot and cold faucets are both open, the direct

connection between the hot and cold supplies may permit cold water to flow into the hot-water line or vice versa. This condition might make it difficult to obtain water at required temperatures elsewhere in the house.

Machines with a fixed time-fill control will require water pressures of not less than 20 pounds per square inch, and preferably 30 pounds per square inch, to fill the tub with sufficient water.

It is advisable, whenever possible, to accumulate clothes for a full load as, in general, one full load will require less water and less detergent than two half-loads.

A number of things should be considered before buying any washing machine, to assure choosing the machine which fits best within the conditions under which the machine will be used. CR presents here a list of "things to look for before buying." Very possibly not every housewife will find the order of the items in this list to coincide with her own needs, but the items are listed here in the order of importance in CR's opinion for most people about to buy washing machines.

*First:* Check availability of service in local area.

*Second:* Effectiveness in washing.

*Third:* Total quantity of water required for full load (this not only affects the supply but also the disposal).

*Fourth:* Quantity of hot water required per load.

*Fifth:* Amount of water left in clothes (important, as it directly affects the cost of gas or electricity for the drying operation).

*Sixth:* Time required for complete cycle.

\* \* \*

Unless otherwise stated in the following listings, all machines had a shut-off device that operated when the load was badly out of balance. Prices shown in the listings do not include suds-saver which is available on several washers at about \$20 extra.

## Automatic washers

### A. Recommended

**Easy Spiralator, Model ADF** (Easy Washing Machine, Division of Murray Corp. of America, Syracuse 4) \$330.

Effectiveness in washing an 8-lb. load, good. Cabinet finish: top, porcelain; lid and sides, enamel; tub, porcelain. Agitator, aluminum. Has separate "soak" cycle. "Fine Fabrics" cycle provides warm water only. Lacks shut-off for unbalanced load. Opening lid does not stop action; tub spins about 1½ min. after machine shuts off (undesirable).

**Kenmore Cycla-Fabrie** (Sears, Roebuck & Co.) Beginning at \$245, plus shipping charges, when ordered from catalog.

This model is similar to *RCA Whirlpool Imperial*. The *Kenmore* provides a choice of five different wash water temperatures, hot, medium, warm, cool, and cold; the *RCA Whirlpool Imperial* provides hot, medium, and warm. The *Kenmore* has a shut-off for unbalanced loads but does not have an electrically-operated lid.

**Maytag, Model 140** (Maytag Co., Newton, Iowa) \$380.

Effectiveness of washing an 8-lb. load, very good. Cabinet finish: top, porcelain; lid and sides, enamel; tub, porcelain. Agitator, plastic. Opening lid stops action at any stage of cycle (desirable).

**RCA Whirlpool Deluxe, Model W5704000 (Sales No. DA-40)** (Whirlpool-Seeger Corp., St. Joseph, Mich.) \$240.

Effectiveness in washing an 8-lb. load, very good. Cabinet finish: top, lid, and sides, enamel; tub, porcelain. Agitator, plastic. Design of outer tub is such that suds can accumulate around the top, making cleaning and removal of suds difficult. Not a fully automatic washing machine since single-hose inlet requires that operator manipulate faucet valves to control temperature. Lacks shut-off for unbalanced load. Opening lid does not stop action (undesirable).

**RCA Whirlpool Imperial, Model W5704001 (Sales No. DA-90)** (Whirlpool-Seeger Corp.) \$370.

Effectiveness in washing a 9-lb. load, very good. Cabinet finish: top and lid, porcelain; sides, enamel; tub, porcelain. Agitator, plastic. Electrically-operated lid opens automatically and buzzer sounds at end of cycle. Lacks shut-off for unbalanced load. Opening lid during cycle stops spinning action only.

\* \* \*

**Frigidaire, Model WDU-57** (Frigidaire Division, General Motors Corp., Dayton, Ohio) \$340.

Effectiveness in washing an 8-lb. load, good. Some tangling. Cabinet finish: top, lid, and sides, porcelain; tub, porcelain. Pulsating agitator, plastic and rubber. Lacks shut-off for unbalanced load. Opening lid during cycle stops spinning action only.

**Kelvinator, Model WAG6** (Kelvinator Division, American Motors Corp., Detroit) \$290.

Effectiveness in washing a 9-lb. load, good. Slight tangling. Agitator has vibratory action instead of the more common rotary oscillation action. Cabinet finish: top and lid, porcelain; sides, enamel; tub, porcelain. Agitator, plastic and rubber. Machine could not be shut off during certain parts of fill cycle. Lacks shut-off for unbalanced load. Opening lid does not stop action (undesirable).

**Norge, Model W5-450** (Norge Division, Borg-Warner Corp., Chicago 54) \$330.

Effectiveness in washing a 9-lb. load, fair to good, but for 8-lb. load, good. Cabinet finish: top and lid, porcelain; sides, enamel; tub, porcelain. Agitator, plastic. Equipped with plastic "Dispenser Wheel" which permits adding chemical softener, such as *Calgon*, when the

machine is loaded, for the deep rinse water. Cycle can be advanced or repeated only if machine is shut off first (desirable). This machine has a time-control fill but has provisions for adjusting maximum time period on regular cycle to meet water-pressure conditions. Opening lid does not stop filling or washing action but does stop spin action.

#### B. Intermediate

**Bendix Automatic Washer, Model WGG-C** (Bendix Home Appliances Division, Avco Mfg. Corp., Cincinnati 25) \$350.

Effectiveness in washing a 9-lb. load, only fair (poorest of machines tested, even with 7-lb. load). Cabinet finish: top, porcelain; sides, enamel. Cylinder, porcelain. Has separate "soak" cycle. Machine was found inconvenient to load because of small opening and interference by the door. Machine was considered noisy in operation and vibrated during spin cycle. Lacks shut-off for unbalanced load. Opening door does not stop action (undesirable).

**Easy, Model ASF** (Easy Washing Machine, Division of Murray Corp. of America) \$240.

Effectiveness in washing an 8-lb. load, good. Cabinet finish: top, porcelain; lid and sides, enamel; tub, porcelain. Agitator, aluminum. Lacks convenient and satisfactory means for grounding machine. Opening lid does not stop action; tub spins about 1½ min. after machine shuts off (undesirable). Operating instructions not presented clearly. Lacks shut-off for unbalanced load.

**Philco Automatic Deluxe, Model W-266** (Philco Corp., Philadelphia) \$370.

Effectiveness in washing a 9-lb. load, good. Cabinet finish: top, porcelain; lid and sides, enamel; tub, porcelain. Agitator, aluminum. Controls not as flexible for repeating or changing cycle or water temperature as on some other washers. Rinses relatively poorly. Lacks shut-off for unbalanced load. Opening lid during cycle does not stop action; tub spins about 2 to 3 min. after machine shuts off (undesirable).

**Speed Queen Multi-Cycle, Model A18** (Speed Queen Corp., Division of McGraw Electric Co., Ripon, Wis.) \$350.

Effectiveness in washing an 8-lb. load, very good. Cabinet finish: top and lid, porcelain; sides, enamel; tub, stainless steel. Agitator, aluminum. Only machine of group tested which has provision for operating agitation and spin at regular or slow speeds on either regular or

short cycle. Lacks shut-off for unbalanced load. Warm-water temperature not thermostatically controlled (undesirable). Lid locks shut during all spin cycles but can be opened at other times without stopping action. Excessive leakage current of 1.2 ma. (a measure of shock hazard) requires that this machine be securely grounded for safe operation; otherwise would have received an A rating.

**Westinghouse "Laundromat," Model L-100** (Westinghouse Electric Corp., Mansfield, Ohio) \$350.

Effectiveness in washing a 9-lb. load, fair. Slight tangling. Cabinet finish: enamel. Cylinder, porcelain. Had built-in scale for weighing clothes loaded on open door (a convenient device). Opening of door during cycle stops action (desirable).

**Westinghouse "Space-Mate" Laundromat, Model LH-3** (Westinghouse Electric Corp.) \$230.

Effectiveness in washing an 8-lb. load, fair. Cabinet finish: enamel. Cylinder, porcelain. Opening of door during cycle stops action (desirable). Washer had leakage current of 0.8 ma. A dryer, Model DH-3, of identical outside dimensions is available at \$170, which can be located beside or mounted on top of the washer to provide washing and drying facilities, using minimum floor space. The washer operates on 115 volts whereas the dryer can be operated on either 115 volts or a 3-wire 230-volt circuit. Operating the dryer on 115 volts, however, has the disadvantage of more than doubling the time required to dry a load of clothes. Dried an 8-lb. load in about 35 min. with 230 volts supplied. Dryer has provisions for venting outdoors. Drying temperature range, 120° to 140°F, but temperature in dryer reached 210°F after clothes became dry.

#### Automatic washers previously tested by CR

The following machines were tested in 1955 and reported in the October 1955 BULLETIN. Some have been replaced by newer models.

#### A. Recommended

*General Electric Filter-Flo, Model WA-750M; Hotpoint, Model 10LK2; Kenmore Cylca-Fabric, Model 110-553590; Maytag, Model 101P.*

#### B. Intermediate

*Westinghouse Laundromat, Model L-8.*

## Automatic washer-dryer combinations

The trend toward automatic washer-dryer combinations continues with five manufacturers now in the race as compared to only one a couple of years ago. A washer-dryer combination, while combining a washer and a dryer in one unit, will not, in most instances, replace the individual

units satisfactorily. Actually, the disadvantages of a combination are such as to outweigh, for many, the advantages.

The combination requires less floor space than single units of a washer and dryer. This, however, has been offset by the recent introduction

## WASHER-DRYER

Brand	Rated capacity, pounds	Dimensions, inches			Time to wash, full cycle, minutes	Time to dry, full load, minutes	Water used, gallons		
		width	height	depth			washer		dryer
							hot	cold	cold
Easy CDF	8	28	39	26	39	65	20	5	33
General Electric 1WD560N1W	8	30	36	26	55	80	16	20	40
RCA Whirlpool W5710500	9	33	45	26	38	65	14	9	—
Westinghouse Deluxe WD 2	8	32	41	29	52	83	20	15	46

of the Westinghouse "Space-Mates" washer with the dryer unit which is designed so that it can be placed on top of the washer, and hence the two require the floor space of one unit. A second major advantage of the combination washer-dryer is that the housewife can have her clothes washed and dried by merely loading the machine at the beginning and later removing the clothes after they have been washed and dried, with no handling in between.

In contrast to the two advantages cited, there are several disadvantages to a washer-dryer combination. The owner of such an appliance risks having to replace both washer and dryer at such time as one or the other of the two units will get out of order or fail. Of course, one could replace only the unit that failed and continue using the combination as either a washer or a dryer, as the case might be. This, however, would tie up costly equipment unused. A still greater disadvantage of a combination washer-dryer is that it takes approximately two hours to wash and dry a load of clothes. During this two-hour period, both the washer and dryer are tied up. On the other hand, with two separate units, a second load of clothes could be washed while the first load is being dried, making it possible for the housewife to wash and dry *two* loads of clothes in about the same two-hour period. Operating costs of a combination are greater than for the single washer and dryer units, since combinations, in general, do not extract the water as well as individual washers. This means that the extra water must be removed in the dryer. Not only does this extend the time for drying but it increases the amount of electricity consumed. Evaporation of water is an expensive process, especially when done by use of electricity. In a year's time, the extra cost of evaporating water from clothes containing a needlessly large amount of

water can be quite an expense to the householder.

In order to combine the necessary operating parts for a washer and dryer within a given cabinet, the size of the drum is necessarily reduced; this small size contributes to slower drying action and increased wrinkling. Another problem of most combinations is that they require cold water for condensing the steam during the drying operation. Not only do they use approximately 40 gallons of cold water per load of clothes dried, but means must be provided for disposing of this additional water where cesspools or septic tanks of limited size are used for the sewerage system of the home. One exception to the condenser-type combination is the *Whirlpool* which can and should be vented to the outdoors and so requires no water flow to dispose of the evaporated moisture.

The prospective purchaser of a combination will have to take into account the pros and cons and decide for himself which features are to him of greatest importance. One further drawback of the combinations is that the dryers operate so that the air within reaches rather high temperatures, usually well over 200 degrees and some even reaching 300 degrees. CR considers a temperature in excess of 250 degrees higher than is necessary or desirable. Single-unit dryers which operate efficiently do so at clothes temperatures in the neighborhood of 125 to 150 degrees. These lower temperatures are certainly far more favorable to clothes than temperatures in the region of 250 to 300 degrees.

CR wishes to emphasize the importance of checking before buying that good service is available in the area on a combination or an automatic washing machine. Without good service, the best machine may prove to be a grave disappointment to its owner, if even a minor failure should occur.



## COMBINATIONS

Water left in clothes, percent dry weight	Electricity used for complete cycle, watt-hours		Temperature in dryer, "Low," degrees F		Temperature in dryer, "High," degrees F		Water temperature selection		Brand
	washer	dryer	range	peak	range	peak	wash	rinse	
102	410	4490	160-180	215	220-235	300	Hot, Warm	Warm	Easy CDF
110	345	4500	—	190	—	260	Hot, Warm	Warm	General Electric 1WD560N1W
120	1000	6200	95-115	150	95-115	230	Hot, Med., Warm	Warm	RCA Whirlpool W5710500
117	290	5940	—	—	190-225	305	Hot, Warm	Warm	Westinghouse Deluxe WD-2

On all washer-dryer combinations, the cycle was stopped by opening the door.

The *Bendix Duomatic* combination had not been received at the time this BULLETIN went to press and will therefore be discussed in a forthcoming BULLETIN.

## Combinations

## B. Intermediate

**Easy Washer-Dryer, Model CDF** (Easy Washing Machine, Division of Murray Corp. of America, Syracuse 4) \$480.

Effectiveness in washing an 8-lb. load, fair. Cabinet finish: top, porcelain; top rear panel, sides, and door, enamel. Rotating cylinder, porcelain. Machine is designed to be fastened to floor. Machine can be preset to stop at any part of the wash, rinse, or dry cycle. If the control is reset during operation beyond the stopping device, the machine will not stop at the end of the drying period but will proceed into a new washing cycle. Machine uses relatively large quantities of water and electricity. CR suggests that the new owner of this machine fill, drain, and refill the washer several times in the presence of the installer or demonstrator because the water inlet line requires very careful adjustment to avoid the possibility of water backing up and flooding.

**Kenmore Turbo-Matic Washer-Dryer** (Sears, Roebuck & Co.) Beginning at \$400, plus shipping charges, when ordered from catalog.

This model is similar to *RCA Whirlpool*. Controls on the *Kenmore* are located on a panel at the rear of the top instead of at the front of the machine, as on the *RCA Whirlpool*. The *Kenmore* has an 8400-watt air heater which gives faster drying than the 5600-watt heater of the *RCA Whirlpool*. The loading door of the *Kenmore* is hinged at the bottom so that, when open, it provides a tray that facilitates loading and unloading and prevents clothes from dropping to the floor.

**RCA Whirlpool Combination Washer-Dryer, Model W5710500 (Sales No. DC-50)** (Whirlpool-Seeger Corp., St. Joseph, Mich.) \$530.

Effectiveness in washing a 9-lb. load, fair. Cabinet finish: top, porcelain; sides and front, enamel; rotating cylinder, porcelain. Electric water heater makes possible a hot-water wash even if warm or cold water is supplied; the fact that this heater operates during entire wash period when water temperature is set at "Hot" causes a relatively high consumption of electricity for the wash cycle. The dryer operation, designed for outside venting, uses no water but has relatively high consumption of electricity. To wash and dry a 9-lb. load will cost about 14c or more for electricity, at 2c per kw-hr. of electricity; this is about double the cost when using separate washer and electric dryer. Dryer control, which determines maximum drying temperature, may be set at any value from "Air" (off) to "High" (desirable). Excessive leakage current of 3.0 ma.; satisfactory only if securely grounded for safe operation.

\* \* \*

**Westinghouse Wash 'N Dry Laundromat Deluxe, Model WD-2** (Westinghouse Electric Corp., Mansfield, Ohio) \$530.

Effectiveness in washing an 8-lb. load, fair. Cabinet finish: enamel. Rotating cylinder, porcelain. Machine uses relatively large quantities of water and electricity. Excessive leakage current of 2.5 ma.; satisfactory only if securely grounded for safe operation.

## C. Not Recommended

**General Electric Washer-Dryer, Model 1WD560N1W** (General Electric Co., Louisville, Ky.) About \$500, plus top. This is an under-counter combination.

Effectiveness in washing an 8-lb. load, fair. Cabinet finish: front, porcelain; sides, enamel. Rotating cylinder, porcelain. Machine is designed to be fastened to floor. Excessive vibration during spin cycle repeatedly actuated an unbalance switch which slowed down the rotating cylinder for redistribution of the load. As a result, water extraction was quite poor. Machine uses relatively large quantities of water and electricity. Markings on control dials were somewhat ambiguous, and instruction booklet was not clearly written. Excessive leakage current.

## Repainting

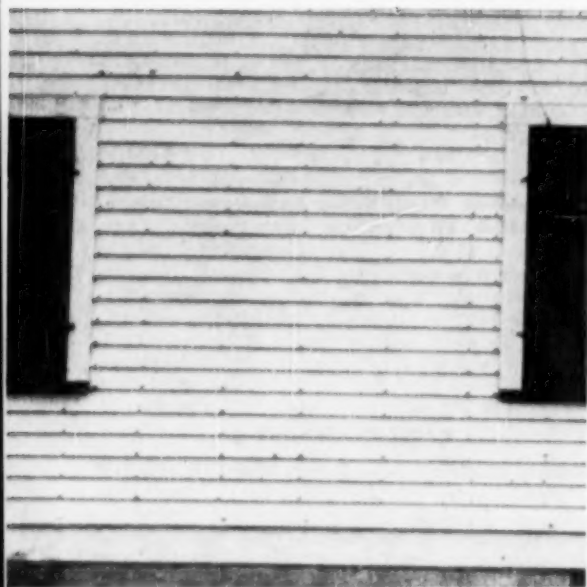
FOR LONG LIFE OF PAINT, a repaint job should be done with paint as similar as possible in composition to the paint previously used. Many consumers, assuming that frequent repainting is favorable to the best protection of the wood, make the mistake of painting far too frequently. Painting should rarely, if ever, be done at intervals shorter than four years; more frequent painting soon builds up coatings that are too thick to perform well, and may, therefore, fail prematurely. When possible, it is better to paint with one coat rather than two.

The successive coats in a house painting job should follow one another promptly. One or two days apart is best; two weeks apart should be the maximum. When a job is completed, it

should not be considered for further painting until it has become thoroughly weathered, which requires at least four years. As has been mentioned, modern practice among consumers tends toward over-frequent painting, which results in a paint coating developing certain defects of appearance and durability that go with coatings that are too thick.

There is no sure way to avoid the appearance of rust spots coming through the paint where ordinary steel nails have been used on the siding. Aluminum or galvanized nails are now used to take care of this difficulty. Paints of the kinds that contain no zinc oxide are least susceptible to rust stains.

Early peeling of paint on galvanized iron, such as gutters and downspouts, commonly comes from failure to use a special priming paint *for metal* next to the metal surface. Metal primers made with zinc dust and zinc oxide, with zinc chromate, or with red lead are suitable. Over the primer the house paint or trim paint used on the rest of house may then be applied. If the old paint failed for lack of proper primer it is necessary to remove all old paint so that a metal primer may be used in its proper place, on the metal itself. There are a considerable number of manufacturers producing zinc-dust-zinc oxide paints. Ordinarily the consumer would be able



*The black dots in these pictures show the rusting at nail holes where the nails have not been properly protected.*



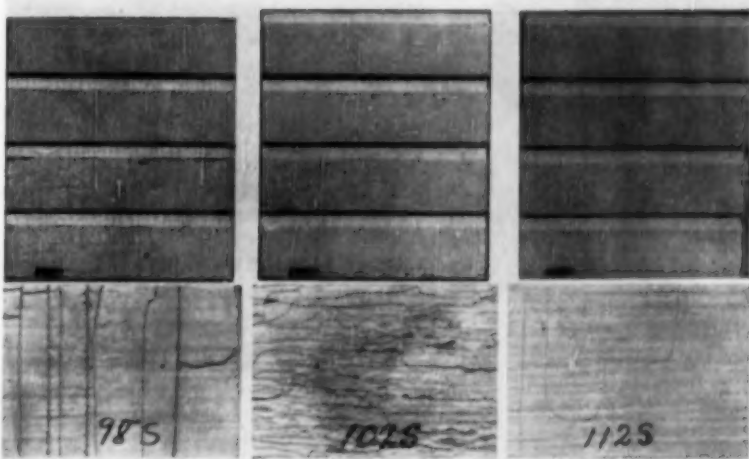
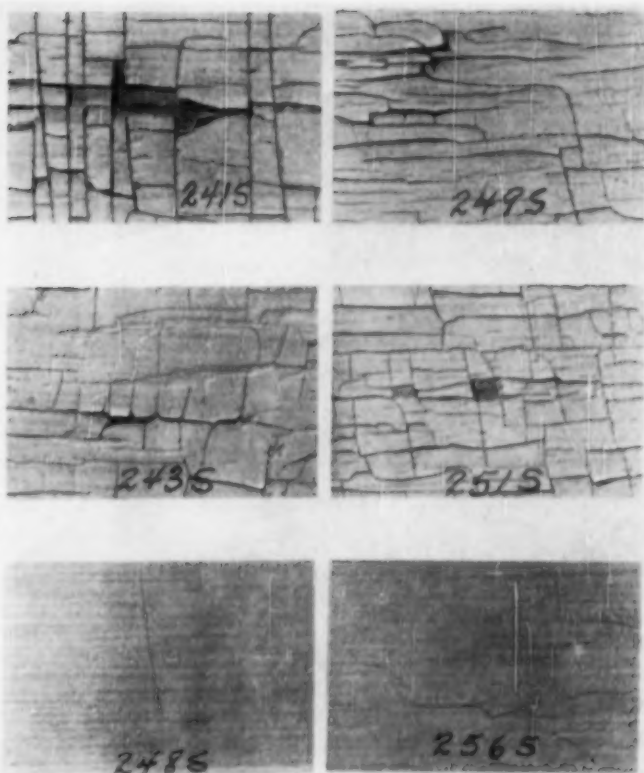
The pictures at the right are close-ups of areas of 2 x 3 inches, and all panels were 15 years old.

241S and 249S were repainted with one coat every 3 years.

243S and 251S were repainted with one coat every 4 years.

248S and 256S were repainted with two coats every 6 years.

In all cases, the paint reached more than the 5 thousandths of an inch thickness which is considered most favorable for a paint coating, and the condition was worse with more frequent repainting and thicker coats. The wood was western red cedar or eastern white pine, and the paint used was: titanium-zinc-lead on 241S, 243S, and 248S; titanium-zinc, lead-free on 249S, 251S, and 256S.



The pictures at the left show the effect of frequency of repainting on the condition of the paint coating. The lower views are enlarged portions of the paint surfaces above:

98S—2 coats every 2 years for 12 years, photographed 3 years later.

102S—1 coat every 4 years for 12 years, photographed 3 years later.

112S—2 coats every 6 years during 12 years, photographed 3 years later.

Note that extensive cracking goes with the thick coatings which correspond to frequent repainting. The coating was 22.5 thousandths of an inch thick on 98S. Cross-grain cracking is worse with thick final coatings of paint.

The wood used was Douglas fir and southern yellow pine.

to buy a paint of this type from a large paint dealer accustomed to handling paint and related supplies for industrial users. Any consumer having difficulty finding a source of supply may write Consumers' Research, sending a reply-paid ready-addressed envelope; the names of a few

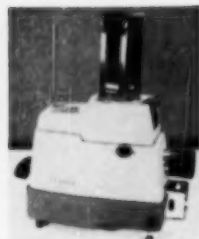
manufacturing sources in his region will be given in response to the subscriber's request. Consumers can then learn by inquiry of the manufacturer the name of a dealer in his neighborhood where the paint can be purchased, or make other suitable arrangements for obtaining the paint.



TDC Robomatic



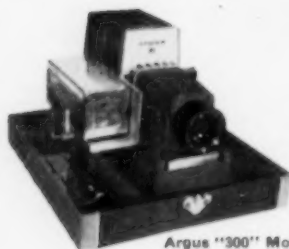
A. O. Executive 300



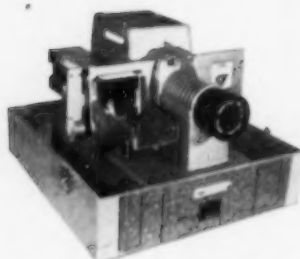
LaBelle Director



Project-O-Matic



Argus "300" Model III



TDC Headliner 303 Model 425

## Slide projectors

### Semiautomatic and automatic

Until recently, it was necessary to feed slides in a projector by hand, one at a time, removing the slide that had been shown and returning it to its box or file case. This method had several disadvantages. In the dim light available to the projectionist, as it was difficult to locate the slides needed, it often happened that slides got out of order or were shown upside down or reversed left to right. It was necessary to mount slides in glass or metal mounts to prevent damage from handling, if they were to be shown frequently.

Accessory slide changers, such as *TDC* and *Airequipt*, which could be attached to many of the conventional projectors, have gotten around the disadvantages mentioned and convert projectors to semiautomatic operation. In these changers, 30 or 36 slides are loaded into a tray with numbered partitions. Pushing a lever feeds the slide into the projector; pulling the lever out removes the slide, returns it to its compartment in the tray, and advances the tray for the next slide (on the *TDC*, it is also necessary to turn a knob to advance the tray for the next slide). Most semiautomatic projectors now have these or similar devices built in. Additional trays or magazines can be purchased at 59 cents to \$2.15 each, depending upon the make; in spite of the

cost for magazines, this method of handling slides is less expensive than mounting the slides in metal mounts, and it is more convenient than mounting slides in glass.

The fully automatic projectors are electrically powered to change the slides automatically at the desired intervals of time. The time interval is adjustable to suit the viewer's convenience. The automatic projectors can be operated semiautomatically, if desired, by pressing a key or button to change the slide.

### For 2 x 2 in. slides (35 mm. transparencies)

#### SEMIAUTOMATIC

##### A. Recommended

**TDC Headliner 303, Model 425** (Three Dimension Co., Div. of Bell & Howell, Chicago) \$54.50 with semiautomatic *Selectron* changer and case. Coated *TDC Vivid f/3.5 Trionar Anastigmat* lens of 4-in. focal length, focused by turning the helical lens mount. 300-watt lamp, blower-cooled; triple condenser (one lens of the condenser of special glass acts as a filter). This particular lens broke into many small pieces while cooling during test but was replaced, at no charge, by the manufacturer; the new lens was easily placed in the projector. Cooling fan has no switch and runs when projector is plugged in; lamp is controlled by a switch. The light output was only fair. Evenness of illumination, good. Resolving power of lens, good. Temperature of slide, 165°F (satisfactory). The magazine for

the *Selectron* changer will accept cardboard, taped glass, and metal mounts, although cardboard mounts are recommended by the manufacturer. 2

#### B. Intermediate

**Argus "300," Model III** (Argus Inc., Ann Arbor, Mich.) \$59.50, with semiautomatic *Airequipt* slide changer and one magazine; manual changer for single slides; and carrying case. Capacity, 36 slides. Coated, color-corrected, triple-element  $f/3.3$  lens of 4-in. focal length, focused by turning in helical mount. Equipped with 300-watt lamp, blower-cooled; triple condenser (one glass of the condenser is heat-absorbing). There is an outlet on the base of the projector for operating an accessory. Light output, good. Evenness of illumination, good. Resolving power of lens, fair. Slight color-fringing at corners and slight curvature of field. Temperature of slide, 168°F (satisfactory). The magazine would not accept metal or taped glass mounts, which is a disadvantage. The manual changer accepted metal, cardboard, or taped glass slide mounts. 2

**A.O. Executive 300** (American Optical Co., Chelsea, Mass.) \$77.50, with case and one slide tray. Capacity, 40 slides. Coated  $f/3.5$  lens of 5-in. focal length, focused by turning helical lens mount. 300-watt lamp, blower-cooled; double condensers and a heat filter, easily removed for cleaning. Blue filter automatically comes into position to reduce glare on screen when slide is being changed. No provision for showing single slides without use of the slide changer. With selector lever set at manual, tray can be moved to any position. When set at "auto," tray can be advanced any amount but can be reversed only one slide position. Separate switches for fan and lamp, but lamp will not operate unless fan is on (a good feature). Projector had convenient carrying handle. Instructions for operation are given on a plate on the back of the projector. Light output, good. Evenness of illumination, fair. Well baffled against light leaks. Resolving power of lens, fair. Temperature of slide, 163°F (satisfactory). Slide changer operated satisfactorily with all types of slide mounts. This projector will not satisfactorily project the new *Super Slides*, which are  $1\frac{1}{2} \times 1\frac{1}{2}$  in. in  $2 \times 2$  in. mounts for pictures taken by *Rolleiflex* and other  $2\frac{1}{4} \times 2\frac{1}{4}$  in. cameras (cuts and darkens corners). 3

#### C. Not Recommended

**LaBelle Director** (LaBelle Industries, Inc., Oconomowoc, Wis.) \$69.95, with case and two slide magazines each holding about 115 cardboard-mounted slides. Coated  $f/3.5$  *Anastigmat* lens of 5-in. focal length, focused by turning helical mount. 300-watt lamp, blower-cooled. Double condensers and a heat filter. These can be removed for cleaning, but the operation is inconvenient. Shutter behind the lens closes automatically when slides are changed. Single slides can be shown if desired. One tray is used as a hopper on the top of the projector in which the slides to be shown are placed (somewhat inconvenient to load). After being shown, they drop into the second magazine, placed in the base, in the same sequence. Slide positions in magazines are not numbered, a disadvantage.

Cooling fan has no switch and runs whenever projector is plugged in (good). Lamp is controlled by a switch. Light output, below average for 300-watt projectors. Evenness of illumination, fair. Not well baffled against light leaks. Resolution of lens, poor. Temperature of slide, 188°F (high). Slide changer operated satisfactorily with cardboard-mounted slides but would not operate with some metal- and glass-mounted slides. Blower fan was exceptionally noisy. Will not satisfactorily project the new *Super Slides* (cuts corners). 3

**Project-O-Matic** (Viewlex, Inc., Long Island City, N.Y.) \$69.95, with case and six slide trays each holding 30 slides. Coated  $f/3.5$  *Luxtar-OK Anastigmat* lens of 5-in. focal length, focused by turning helical mount. 300-watt lamp, blower-cooled. Double condenser and a heat filter easily removed for cleaning. No provision for showing single slides without use of the slide changer. Cooling fan has no switch and runs when projector is plugged in; the lamp is controlled by a switch. This arrangement is good in that it prevents the projector from being used without the fan in operation. Light output, about average for a 300-watt projector. Evenness of illumination, fair. Well baffled against light leaks. Resolution of lens, poor. Temperature of slide, 190°F (somewhat high). The slide changer operated satisfactorily with all types of slides (cardboard, taped glass, and metal mounts). There was slight masking of corners of *Super Slides*. 3

#### AUTOMATIC

##### B. Intermediate

**Revere P-888** (Revere Camera Co., Chicago 16) \$144.50, with case and 7 magazines. A completely automatic built-in slide-changing device feeds slides from a magazine (which holds 36 slides) into the projector and returns them to the magazine. Has choice of three speeds for automatic operation, and provision for semiautomatic operation and remote control. Built-in pointer. Adjustable light output. Coated  $f/3.5$  *Wollensak* 5-in. lens. 500-watt lamp, triple condenser (one glass of which is heat-absorbing), and cooling fan. The light output was very good, and evenness of illumination, fair. Resolving power of lens, good. Temperature of slide, about 185°F (somewhat high). The projector tested did not work satisfactorily, as received. On several occasions, after the projector had been operating for a short time, the automatic changing device slowed and finally failed to operate. However, the projector was repaired by the factory at no charge, and worked as intended thereafter. Purchasers might be wise to obtain a guarantee of full refund within a 10-day trial period if projector proves unsatisfactory. 3

**TDC Robomatic** (Bell & Howell Co., Chicago) \$139.50, with case and one slide tray with cover. Capacity, 30 slides. Coated  $f/3.5$  *Procomat Anastigmat* lens of 5-in. focal length, focused by turning knob on top of the lens housing. 500-watt lamp, blower-cooled. Double condensers, heat filter. Heat filter and front condenser lens are removable for cleaning; rear condenser lens must be cleaned in place, not a very convenient arrangement. Shutter behind lens closes auto-



matically when slides are being changed. A manual changer is available as an accessory for showing single slides. With selector control set at manual, turning a knob will bring any desired slide into position for showing. For automatic or semiautomatic operation, the control can be set for "forward" or "reverse," permitting slides to be re-shown, or to bring back for reviewing a slide that has already been shown. In semiautomatic operation, a key connected to a solenoid is pressed each time the next slide is to be shown. For automatic projection, a remote control *Robomatic* timer is plugged in. This has a dial which can be adjusted for time intervals from one slide to the next of 5 sec. to  $1\frac{1}{2}$  min. This control also has a cycle button which is held down to permit the operator to reduce the time a slide is being projected or to run a number of slides through in rapid succession. When this button is released, the projector resumed automatic operation. Separate push-key switches for fan and lamp, but lamp will not operate unless fan is on (a good feature). The projector had both elevating and leveling devices (very good). Light output, good. Evenness of illumination, fair. Well baffled against light leaks. Resolving power of lens, fair. Temperature of slide,  $176^{\circ}\text{F}$  (somewhat high). As received, cardboard-mounted slides jammed, but after the arm which pushes slides into position had been adjusted, the projector operated satisfactorily with all types of slides. Will not satisfactorily project the new *Super Slides* (cuts the corners). 3

**For 2-3/4 x 2-3/4 in. slides (2-1/4 x 2-1/4 in. and smaller transparencies)**

**SEMI-AUTOMATIC**

**C. Not Recommended**

**Brumberger, No. 1422 Riviera** (Brumberger, Brooklyn 32, N.Y.) \$75, with  $2\frac{1}{4}$ -in. slide changer. 35 mm.

manual slide carrier, \$4. Carrying case, \$15. Coated *Wollensak Anastigmat Series O* lens of 5-in. focal length, and aperture of about  $f/3.5$ , focused by turning helical mount. 300-watt lamp, blower-cooled; double condenser and heat filter, not easily removed for cleaning. Slide changer does not have removable trays; instead, the slides are stacked uniformly (not in numbered slots) in the front feed tray, which is part of the changer. Pulling the slide changer handle out after projecting the slide removes slide, transfers it to a take-up tray which is also part of the changer. A lever is set in one position for showing cardboard-mounted slides, in another position for showing slides mounted in glass or metal. Changer worked well on all types of slides, but manufacturer recommends using only slides mounted in glass or metal, because the  $2\frac{3}{4} \times 2\frac{3}{4}$  in. cardboard mount gives insufficient support to the transparency, which may easily buckle; besides, repeated showings of cardboard-mounted slides will fray the paper edges of the mounts, preventing them from feeding properly from the changer. Capacity of the changer, about 25 metal-mounted slides or 35 cardboard-mounted slides. The *Brumberger* had provision for horizontal alignment of screen image by tilting changer assembly and locking into position, and its lamp was provided with both vertical and horizontal adjustment (both are good features, but knob for locking horizontal alignment was difficult to tighten sufficiently to lock in place). Cooling fan has no switch, and runs when the projector is plugged in; the lamp is controlled by a switch. Evenness of illumination, poor. Light output, about average, for a 300-watt projector, with  $2\frac{1}{4} \times 2\frac{1}{4}$  in. transparencies, but poor for 35 mm. transparencies. Resolution of lens, good in the center of the field, but very poor at the corners of  $2\frac{3}{4} \times 2\frac{3}{4}$  in. slides. Temperature of slide,  $135^{\circ}\text{F}$  (very satisfactory). Not well baffled against light leaks. 2

## Corrections and Emendations to Consumers' Research Monthly Bulletins

**Laundry detergents** The manufacturer of *Trend* has  
Page 23 advised CR that the price of  
Oct. '56 Bulletin *Trend* is 39 cents for two packages or  $24\frac{1}{2}$  ounces rather than 39 cents for  $12\frac{1}{4}$  ounces as was given in the listing. *Trend* was one of two brands listed in this article which were light-duty synthetic detergents, for delicate garments and clothes that are only slightly soiled. (The other brand was *Dreft*.)

**A dial fever thermometer** Further tests of the *Cary* fever  
Page 25 thermometer originally tested,  
Oct. '56 Bulletin and six new ones, warrant a change of rating of the *Cary* from *B. Intermediate* to *A. Recommended*. The

errors of the one *Cary* originally tested seem to have been larger than is normal for this instrument, as six others tested later showed very good accuracy; all six were within the 0.2 degree tolerance permitted by the federal specifications.

**The new television receivers** Change the rating of the *Emerson Portable Model 1232* from  
Pages 24-25 *C. Not Recommended* to *B. Intermediate*. Leakage current measurements on several additional samples of this receiver indicate that the original sample tested was not representative in respect to electrical hazard. On the later samples, the leakage current averaged 0.6 ma.



## **The tropical fish hobby—considerations for the beginner**

**By W. OTIS FITCHETT**

IT HAS BEEN authoritatively reported that the keeping of tropical fish in the home is America's third most popular hobby, ranking just below photography and stamp collecting. About 20 million hobbyists own fish collections; and pet shops are doing a thriving business, both in fish and allied equipment. Certainly the hobby is second to none in its ability to attract enthusiasts of all ages.

Like the amateur photographer or the sports car owner who searches out new equipment and gadgets, the tropical fish fancier has a similar desire to own various kinds of fish and accessories for his aquarium.

There are over 200 kinds of tropical fish that are generally available for retail purchase; not all of these can be recommended, of course, for

the beginner. Prices range from 50 cents for a pair of lowly (though ever popular) guppies from Latin America, to \$300 for a pair of breeding-size black angel fish (a mutation).

The care and breeding of tropical fish is an interesting and educational hobby, but it can be an expensive one if the fish are improperly grouped or housed, or unsuitable or unsatisfactory equipment is bought. A well stocked and artistically planted aquarium can form an attractive point of interest in most any living room, play room, or den.

Most beginners err by starting out with an aquarium that is too small. An undersize tank will soon become overcrowded as various species of fish are added, and must soon be replaced by a larger one. It is usually best to start with a

15-gallon-size tank which is considered the ideal capacity for a beginner. However, even outgrown small tanks are useful for other than display purposes, such as special breedings, isolation of sick or pugnacious specimens, etc.

A 15-gallon tank can safely house 30 fish of small to medium size (approximately 1½ inches in length). If a pump is used for aeration, this population can safely be doubled.

The following is a recommended list of the essential parts needed to become a beginner in the tropical fish hobby.

1 15-gallon tank with single weight glass cover.....	\$11.00
1 75-watt electric heater with automatic thermostat control.....	6.00
20 fish of various breeds (both egg layers and live bearers).....	13.50
1 aquatic plant assortment, together with bottom gravel and decorative rocks.....	3.50
1 small scoop net.....	.50
1 floating thermometer.....	1.00

Total, about.....\$35.50

Where strong daylight (northern exposure preferred) is not available, an electrically lighted tank cover is a must. Such a cover is available at about \$5. Of course, it is not necessary to buy anything beyond the items listed if there is a natural balance within the tank as represented by a correct proportioning of active plant life and animal life (fish). Such a balance is readily obtainable by the beginner because the lower-priced fish and plants are the most adaptable. Once established, the tank will remain clear with only an occasional (perhaps weekly) removal of debris from the bottom gravel with a dip tube (cost, about \$1).

While the heater and thermostat are desirable, they are not always necessary, being vital only in tank locations where there is a wide temperature variation.

Advanced hobbyists employ electric-motor-driven air pumps and small outside plastic or glass containers of granulated charcoal and glass wool for filtering the water. Prices of pumps start at \$5 for a small vibrator type, up to approximately \$30 for the reciprocating-piston types. Complete filters run about \$3.

All of the above information applies exclusively to fresh-water tropical fish, which are collected in the tepid-water streams in the tropical and sub-tropical areas of all six continents. The housing of salt-water tropical fish should be attempted only by the most experienced aquarist

with the help of the best mechanical and electrical aids.

There are many excellent books and booklets covering the tropical fish hobby. Among these are:

The Aquarium Beautiful. 10 cents. J. B. Maris Co., Bloomfield, N.J.

Your Aquarium. 25 cents. Innes Publishing Co., 119 N. 12 St., Philadelphia 7.

All About Aquariums. \$1.75. Practical Science Publishing Co., Orange, Conn.

Exotic Aquarium Fishes. \$8.75. Innes Publishing Co.

Among the periodicals are:

The Aquarium. \$3 a year. Innes Publishing Co.

The Aquarium Journal. \$3 a year. Golden Gate Park, San Francisco 18.

Tropical Fish Hobbyist. \$1.25 a year. 57 Academy St., Jersey City 5, N.J.

The widespread interest in tropical fish has brought forth a number of stories and movies bearing on the subject. Some full-length novels have also used the theme. The most widely distributed one is probably *The Case of the Frightened Fish*, by DuBois, Grossett & Dunlap Publishing Co., New York 10.

**Editor's note:** Because of the current widespread interest in tropical fish, and the large variety of equipment being offered, CR will plan to test and report on certain items of accessory equipment for aquaria, such as air pumps, heaters, and filters, should a considerable number of subscribers indicate their interest in such information.

#### Acknowledgments

The following is a list of credits for pictures supplied by outside sources.

**Pages 14 and 15**—F. L. Browne and D. F. Laughnan, *How Often Should a House Be Painted*, Journal of the Forest Products Research Society II (No. 5), 173-93, December 1952.

**Page 19**—New York Zoological Society.

**Page 27**—Ben-Hur Mfg. Co.

## 1957 Chevrolet, Ford, and Plymouth— safety aspects

**Editor's Note:** As safety in automobiles is, in our opinion, of paramount importance, we present this preliminary report, which deals chiefly with safety aspects of the 1957 Chevrolet, Ford, and Plymouth, with some general comments on the new cars.

Road tests on a number of 1957-model cars are now in progress; results on some models of Ford, Chevrolet, and Plymouth (which together account for about 56 percent of total car sales—Chevrolet, 26 percent; Ford, 22 percent; Plymouth, 8 percent) will be issued in an early Bulletin, followed by reports on other makes as fast as tests can be completed and analyzed for our readers.

CLOSE OBSERVERS of automobile advertising will have noted a shift of emphasis; the safety ideas heavily stressed last year by at least one major manufacturer are no longer being featured, for they seem not to have been effective in selling cars. This year the dominant theme in the advertising is longer and lower bodies and more horsepower—always more horsepower, speed, and getaway. Why the manufacturers think cars should be longer, a trend which can only add to the serious parking and traffic congestion problems, and why anyone should want more horsepower to produce speeds above 100 miles an hour and accelerations making for more head-on collisions in passing other cars at high speed will be a mystery to car owners who do not belong in the drag-strip set.

Making the cars lower may improve appearance in the opinion of some, but manufacturers and dealers will not tell you of the serious disadvantages that result from this change. The use of the 14-inch wheel is one of the ways in which a car can be lowered without making major structural changes, but the new smaller 14-inch tires will wear out faster and introduce new and more troublesome braking problems—and brakes were already too small and overloaded, and far behind requirements established by the cars' horsepower, speed, and weight. 6.70 x 15 and 6.00 x 16 tire chains can be used on the new 7.50 x 14 tires by the removal of some links, but it is reported that snow tires for 14-in.



*The victim of this accident was sideswiped by a car having a common type of door handle that stands out at one end from the door surface. The sharp handle completely penetrated the pedestrian's arm; the force involved was so great as to rip the handle entirely from the car.*

*We are indebted to Irving L. Lichtenstein, M.D., a surgeon of Beverly Hills, California, for the picture and information about the incident which happened to his patient.*

rimms will be in short supply for some time. The smaller tires have other serious disadvantages which cannot be discussed here for lack of space (reduced miles per gallon, difficulty of removal, greater stresses on tire structure on bumps).

Road clearance has, of course, been reduced in the process of lowering the cars' silhouettes. Minimum road clearance is now down to 5.9 inches in the *Chevrolet* (the figure last year was 6.5 inches); 6 inches in the *Ford* (6.5 inches last year); and 5.2 inches on the *Plymouth* (5.4 to 5.6 inches last year). This, of course, means that some of the 1957 models will be chiefly limited to traveling on good highways; most country roads with mud, sand, or ruts will be impassable for these cars, and difficulties of travel in snow will be increased. Garage ramps, too, will present problems. The distance from the bottom of the doors to the ground on the *Ford* is now so small that with passengers in the car the doors strike some curbs and cannot be opened, when the car is parked. Thus passengers have to use the left-hand doors for exit; this adds greatly to the dangers in use of cars al-



ready loaded with needless hazards; alighting from a car on the traffic side is often very hazardous. Lowering of the cars has meant higher humps for the transmission in the front and for the drive shaft in the rear; it is now more than ever impossible for six adults to ride in even reasonable comfort. This year's *Plymouth* is extremely bad in this respect.

In effect, the stylists, who are coming to be the least liked people in the automobile centers (except by the sales departments), have been gradually cutting the car's capacity for adult passengers from six to four. It is more difficult to get in and out of these lower cars, and one who is old, arthritic, or physically handicapped is put at an extreme disadvantage in getting through the doors of several of the new cars. Whereas once one could walk into a car, one must now insinuate oneself, assuming that the complex bends required are not beyond one's physical capacity as determined by size, weight, build, and flexibility of joints.

The high tail fins which may appeal to some style-conscious owners, as present on *Ford*, *Chevrolet*, *Plymouth*, and many others, are not in the interest of safety, for they greatly obscure rear vision when the driver is backing. Many accidents to young children have occurred in backing. With the present popular high fins, the danger is greater than formerly, and larger children as well as little ones may be endangered.

#### **Safety belts not as they were painted**

For the present, CR recommends that subscribers do not purchase or use safety belts in their automobiles. The evidence so far collected indicates strongly that in some types of accidents, instead of preventing injuries, seat belts and some types of shoulder harness actually may increase their severity and may even be a contributing cause of death. (See also page 3 of this BULLETIN.) Consumers' Research will dis-

cuss this subject in considerably more detail in a later issue. But for now, it may be assumed that none of the types of belts offered for passengers' and drivers' use provide the safeguard they were claimed to afford; they may make bad injuries worse or cause fatalities where otherwise the person might have survived.

Nearly all cars now provide fairly good riding qualities, ample speed and acceleration, good and durable mechanical equipment, and satisfactory electrical systems. On that account, it is important to distinguish the various makes and models, so far as possible, on a basis of relative safety. With present high speeds and high horsepower, and rather uniformly good performance as means for transportation of passengers, the safety characteristics of the various cars will rightly be judged the most important consideration in selecting a make and model, for persons who are old enough to be fully conscious of the terrible dangers to passengers and pedestrians implicit in the modern overpowered, overlarge, overheavy automobiles. Forty thousand deaths a year, largely due to these undesirable qualities, should speak volumes to persons who in their driving would want to take no needless risks themselves and likewise would not want needlessly to hazard the lives of children and pedestrians.

The matter of driver fatigue is known to be a factor in many accidents, and automobile manufacturers have seemingly given little thought to the possibilities of designing cars in a way to avoid needless strains on drivers' attention. Better design of control knobs and switches is greatly needed (heater controls are particularly bad on some cars), and perhaps more important is avoidance of visual distortions produced by strongly curved windshields, a factor to be discussed later in our consideration of the 1957 *Plymouth*.



*In moving the foot from the accelerator to apply the brake on the Ford, the knee hits the shift lever.*



*Bullet-nose projections on the front of the Ford bumper present a needless hazard to pedestrians.*





*Ford, Plymouth, and Chevrolet have similar sharp hoods over their headlights.*



*Distortion of view through the Plymouth windshield makes its contribution to eye fatigue.*

*Fragile grillwork in the front of Plymouth is not well protected by the bumper.*



## FORD

The hood ornament has been greatly improved over last year's unsatisfactory design, for it has no sharp points to spear pedestrians. As the hood is now hinged at the front, the hood ornament no longer serves as a handle to lift up the hood and could well be omitted entirely in the interest of pedestrians' safety without detracting from the appearance of the car. The ash tray, severely criticized by CR last year, has been greatly improved from a safety standpoint and is now flush with the dashboard. However, as an ash tray *Ford's* is of doubtful value, for it is too difficult to use.

Ash trays and glove compartments, though seemingly trivial items, are important from the safety standpoint, for poorly designed ones present grave dangers in some cars and can account for quite needless tearing injuries to the faces of drivers or passengers.

There are many unsafe features which should be eliminated, to reduce the degree of injury in an accident. The sharp edges of the headlight shields over lamps would readily fracture the heads, backbones, or hips of pedestrians unfortunate enough to be hit by them. In the interior, the dash has a sharp edge which is dangerous in a crash even when covered by padding (available at an extra charge as an accessory). Padding as now offered does not assure any substantial degree of safety in a crash. The glove compartment door is a potential hazard, as the latch may fail in a crash, allowing the door to open and present a sharp edge to the passenger's face or body.

When the tall driver moves his foot from the accelerator pedal to the brake of the *Ford*, his knee hits the shift lever and his thigh strikes the steering wheel; these interferences could be fatal in a moment of crisis. The heater control knobs are not sufficiently recessed to prevent injury to the knees in a collision. Both front and rear door handles are badly placed, in that they can be accidentally operated by the knees, which would permit the doors to fly open.

As noted in CONSUMERS' RESEARCH BULLETIN for December 1956, on 1957 *Ford* cars equipped with Holley carburetors, there is a possibility that the carburetor linkage may jam, with the throttle in wide-open position. This is an extremely dangerous condition. This failure occurred during CR's tests of the *Ford V-8*, and there have been two cases of runaway cars, with narrow escapes from death due to jamming of the carburetor-linkage, reported in the newspapers since CR's experience; these may or may not have been *Fords*, for in accordance with newspaper practice, the names of the cars involved were not mentioned in either case.

## PLYMOUTH

The hood ornament has been eliminated entirely; for this change the manufacturer is to be complimented. We hope that all automobile manufacturers will soon follow suit. The hoods of the headlights, as with *Ford* and *Chevrolet*, are very sharp and could break the heads, backbones, or hips of pedestrians. The door handles are of

a poor design in that they can readily catch the clothing or arm of a pedestrian; such an occurrence could cause a fatality. See the picture, as to what happened to one pedestrian struck by a poorly designed door handle (of another make). In the interior of the car, the rear view mirror has been moved to the top of the dash; in this position it constitutes a serious hazard of head injury in the event of a crash. When a tall driver moves his foot from the accelerator pedal to the brake, his thigh comes against the steering wheel (see *Ford*). The ash tray is of poor design, as the hand will strike the dash before the cigarette can be extinguished. Great injury to the driver's knees in the event of a crash can occur from contact with several protruding, sharp-cornered control knobs (which should be recessed and differently shaped).

The distortion of vision when looking through the sides of the windshield was very bad; see the center picture at the top of page 23. Such distortion makes for fatigue, particularly in poor light or under bad driving conditions, when vision should be of the best and every cause of needless distraction and fatigue should be avoided. Dr. DuPont Guerrey, III, a medical expert on problems of the eyes, has called wrap-around windshields "diabolical devices, from the visual standpoint, in which all basic optical principles have been completely ignored." He said further that wrap-around windshields cause "terrific visual distortion, increased glare and insuperable diplopia (double vision) all of which, while not directly responsible for accidents, leads to such driver fatigue as to result indirectly in accident causation."

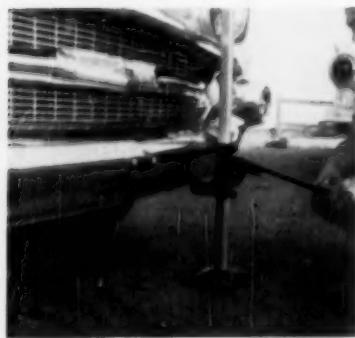
The *Plymouth's* front bumper is free of all knobs and protrusions, but its design is poor; the shape of the center portion of the bumper will make it difficult, if not impossible, to tow this car (except with special dealer equipment) with-

out damaging the ornate and fragile grillwork. The *Plymouth* jack does not have sufficient lift when the car is on a slight incline or soft shoulder to remove a rear wheel. The factory's engineering department should be allowed to check on such matters before a design of car and accessories is finally determined upon. *Plymouth's* door handles and mirror position are features, too, that one would expect a manufacturer would leave to engineers to manage rather than sales department executives and stylists.

## CHEVROLET

Instead of one, *Chevrolet* now has two non-functional spear ornaments; if one doesn't spear the pedestrian and then cut him with the knife edge of the top wing, the other will be available to do so. These hood ornaments are very bad from a safety standpoint. (see articles on hood ornaments in January and November 1956 *BULLETINS*). Hoods over the headlights, like those on *Ford* and *Plymouth*, are also dangerously sharp. The dash has a sharp edge like that on the *Ford*, and the glove compartment door is a potential hazard. When the foot is moved from the accelerator pedal to the brake, the driver's thigh hits the steering wheel. The air intakes for the heater and for ventilation are located over the headlights, a bad feature, as with the openings in this position, the car picks up the deadly carbon monoxide from cars that may be close ahead in heavy traffic or at traffic lights.

The jack supplied with this car will not safely jack up the front end, as the jack lip does not fit the contour of the bumper. A backward push on the car will spring the jack out and let the car fall, with possibilities of a grave or fatal injury to the person concerned.



Note the extremely small portion of the Chevrolet's jack lip that is in contact with the underside of the Chevrolet front bumper.



Illustrating the difficulty of getting into the Plymouth. A weakness of many of today's cars, that can be entered readily only by short, slender, young, agile persons.



## 1957 television receivers

AMONG the several hazards connected with use of television receivers discussed in the December BULLETIN is the danger involved in the emission of small amounts of X-radiation from the face of the picture tube. This is a subject upon which very little published information is available. For this reason Consumers' Research made some tests on television receiver picture tubes in respect to their production of X-radiation, which were sufficient to permit general conclusions regarding the extent of the hazard that might be involved to the frequent viewer of the TV screen.

The results of these tests, in brief, indicate that small amounts of "soft" X-rays are generated within TV picture tubes. "Soft" X-rays, however, have relatively low penetrating ability. In an average 17-inch receiver, 14,000 volts are supplied to the picture tube and tube current is low. The "soft" X-rays produced are absorbed easily and almost completely by the air immediately surrounding the picture tube (within one inch). In some 21- and 24-inch receivers where voltages in the 14,000- to 19,000-volt range are encountered, the "soft" X-rays produced are absorbed by air before they get more than two or three inches from the tube face. Hence, the X-radiation hazard from conventional TV receivers when operating in a proper and normal manner would not be sufficient to be considered at all dangerous at normal viewing distances.

A hazardous condition may occur, however, if a faulty high-voltage supply in a receiver, particularly in a color receiver, should permit an above-normal voltage on the picture tube and increased current through it. For that reason, any viewer, and service personnel in particular, should stay at least six feet away from any operating receiver, particularly if there are indications of abnormal functioning. If it is necessary to leave the chassis out of the cabinet for a four-hour test run after repairs have been made, the serviceman should set the chassis in an uncongested area and keep at least six feet from it. If a breakdown should occur during the check run, there might be danger of substantial amounts of partially harmful X-radiation being generated for a brief time.

None of the receivers listed utilized selenium rectifiers (it is desirable that these should not be used—see December 1956 BULLETIN). It is believed that in the near future TV manufacturers will discontinue the use of selenium rectifiers.

Results of tests of five additional 21-inch TV sets and of color television and of certain hazards in TV viewing, with listings of several of the newest television receivers, was included in the December 1956 Bulletin of Consumers' Research.

Results of tests of five additional 21-inch table models are given in the accompanying article.

It is CR's finding that the 1957 TV receivers are not the equal of the 1956 models in general over-all quality and performance. Quite possibly, in their efforts to reduce production costs in a highly competitive market, the manufacturers have allowed a reduction in quality, hoping that the public would not notice the change.

All the five sets reported in this BULLETIN were equipped with 21-inch-diagonal viewing tubes and built-in antennas which should function satisfactorily in areas close to a transmitting station (within 5 to 10 miles).

### A. Recommended

**General Electric, Model 21T050** (General Electric Co., Syracuse) \$170.

This receiver offered good sound (audio) quality for a table model, and its sensitivity was adequate to provide a very satisfactory picture in fringe areas. A fault of this set was its susceptibility to interference coming in over the power line. ¶A similar chassis is used in practically all General Electric table and console models having 21- or 24-in. viewing tubes. 1

**Philco, Model 4206-S** (Philco Corp., Philadelphia) \$250.

The over-all performance of this receiver was good. It should provide a very good picture in fringe areas. There was some tendency toward line pairing, and it was judged that the range of the brightness control should be increased. A fault of this receiver was its susceptibility to interference entering the receiver through the power line. ¶Other models employing a similar chassis are: Consoles—4608, \$340; 4614-S, \$340; 4614-SL, \$350; 4604 HM, \$320; 4604, \$300; 4700-N, \$300; 4612-G, \$300; 4610-N, \$325; 4206-SL, \$260; 4207-SC, \$260; 4206-ST, \$270; 4600, \$250; 4204-L, \$230; 4204, \$220. 3

### B. Intermediate

**DuMont Trent, Model 21M5607** (Allen B. DuMont Labs., Paterson, N.J.) \$220. Comet chassis.

The chassis used in the receiver tested was a "middle-line" one, and its over-all performance was not as good as afforded by similar DuMont receivers tested in previ-

ous years. The sensitivity was sufficient to provide satisfactory performance in fringe areas. Picture stability and sound quality were below average; susceptibility to interference, above average. ¶Other models employing the Comet chassis are: *Cambridge*, \$320; *Calvert*, \$300; *Stanford*, \$350; *Shelby*, \$320; *Derbyshire*, \$290. 2

**Emerson, Model 1176** (Emerson Radio & Phonograph Corp., Jersey City, N.J.) \$217.

Over-all performance, slightly below average. Judged not suitable for fringe-area use. Relatively poor interlace, slight picture "jitter," and susceptibility to interference from motor-operated appliances were the principal faults of this receiver. ¶Other Emerson models using a similar basic chassis are: *Model 1188*, 24-in. console, \$328; *Models 1186 and 1194*, 24-in. console, \$284 and \$334, respectively. 2

**Motorola, Model A21T33CH** (Motorola, Inc., 4545 W. Augusta Ave., Chicago) \$200. Super-Automatic 5-Star Power chassis with provision for remote-control tuning at an added price.

The quality of sound from this receiver was above average. Sensitivity was good and judged adequate to provide a very satisfactory picture in fringe areas.

However, additional brightness and contrast range would be desirable. There was a slight "picture jitter," and a slight tendency for the picture to "roll"; the receiver would otherwise be worthy of an *A-Recommended* rating. ¶The Super-Automatic 5-Star Power chassis is used in practically all *Motorola* 21- and 24-in. models priced from \$200 to \$370. 2

\* \* \*

Reports with details on the performance of the following receivers were included in the December 1956 CONSUMERS' RESEARCH BULLETIN.

#### A. Recommended

*DuMont Sportsman* portable; *Admiral 223A1N* table model; *Zenith Z3000R* table model.

#### B. Intermediate

*Admiral T103-N* portable; *Emerson 1232* portable; *RCA 8PT70.30* and *14-S-7071* portables; *RCA 21T7152* table model; *RCA 21C77835* color.

#### C. Not Recommended

*Motorola 14P5-2* portable; *Philco C-2004* portable; *Sears 7110* table model.

Comparison Table for the Five 1957 Table-Model TV Receivers Rated in This Bulletin

	DuMont	Emerson	General Electric	Motorola	Philco
Tube size, in. (diagonal)	21	21	21	21	21
Aluminized	Yes	Yes	Yes	Yes	Yes
Cabinet, width	26.6	24.4	25.3	26	28
height	19.8	19.5	19.3	18.7	19
depth	21.0	18	18.4	17.1	19
material	Wood	Wood	Metal	Metal	Wood
Location of controls	Front	Front	Front	Front	Front
Loud speaker size, inches	4	6	4	5.5	6 x 3
Workmanship	Sat.	Sat.	Good	Good	Good
Ease of servicing	Good	Good	Good	Good	Good
Operating cost, cents*	.80	.70	.60	.95	.65
Sensitivity†	Good	Sat.	V. Good	V. Good	V. Good
Picture stability	Fair	Fair	Good	Fair	Good
Picture interlace	Sat.	Fair	Sat.	Sat.	Sat.
Picture brightness	Sat.	Sat.	Sat.	Fair	Sat.
Over-all picture quality	Sat.	Sat.	Sat.	Sat.	Sat.
Sound quality	Fair	Good	Sat.	Sat.	Sat.
Sound power	Fair	Good	Sat.	Sat.	Good
Low voltage operation**	Good	Fair	Fair	Sat.	Fair
Leakage current	Neg.	Neg.	Neg.	Neg.	Neg.

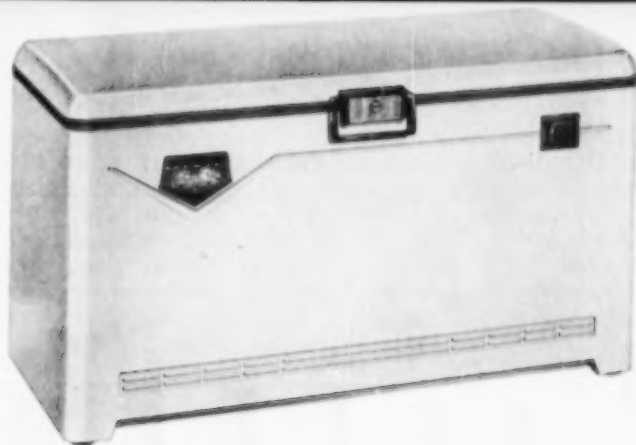
\* Based on 100 hours of use with electricity at 3.5 cents per kilowatt-hour.

† Ability of a receiver to produce a good picture in fringe areas. Under 20 microvolts, very good; 20 to 40 microvolts, good; 40 to 70 microvolts, satisfactory; 70 to 100 microvolts, fair.

\*\* Low power-line voltages will be encountered in many areas. A TV set should function satisfactorily at a voltage as low as 100.

Sat.—Satisfactory; V. Good—Very Good; Neg.—Negligible.

## Chest-type freezer



### B. Intermediate

**Ben-Hur, Model 1356** (Ben-Hur Mfg. Co., Milwaukee 12) \$400. (\$30.30 per cu. ft.)

**Dimensions:** Height, 36 in.; length, 53 in.; width, 27½ in. Total rated capacity, 13.2 cu. ft. (actual, 13.1 cu. ft.), including 2.3 cu. ft. for quick freezing.

**Description:** Storage compartment had two removable wire baskets, and two removable wire separators for dividing the lower part of the compartment into two sections. The quick-freeze compartment is located at the right above the space in which the compressor and motor are mounted. Condensation of moisture on the cabinet is prevented by passing a coil containing hot refrigerant along the inside edge of the outer wall of the cabinet. Temperature control dial mounted on front of freezer is set at the factory; it can readily be adjusted by the user. It has no on-off switch. A warning light, also located on the front of the cabinet, burns continuously so long as the freezer is plugged in and the freezer temperature is at a safe operating level.

**Performance in test:** In no-load test at 90° room temperature, operating cost per cu. ft. per month was 16c (with electricity at 2c per kw-hr.), about average for chest-type freezers previously tested. In storage-load test with freezer full of 1-qt. cartons loaded with material simulating food in containers, although the average temperature was satisfactory ( $-0.5^{\circ}$ ), the temperatures near the top of the storage and quick-freezing compartments were  $10^{\circ}$  and  $12.5^{\circ}$ , respectively (somewhat too high.) Cost of operation per pound of food per month, 0.58c (about 20% higher than average for chest-type freezers previously tested). In pull-down test at  $110^{\circ}$  room temperature, the time required to reach  $0^{\circ}$  was 4.2 hr., which is somewhat longer than average.

\* \* \*

A report of tests on two 15-cubic-foot upright freezers, the *Amana Model 15A* and the *General Electric HUS15*, appears in the June 1956 BULLETIN. Those two freezers received *A-Recommended* ratings.

## How large is your freezer space?

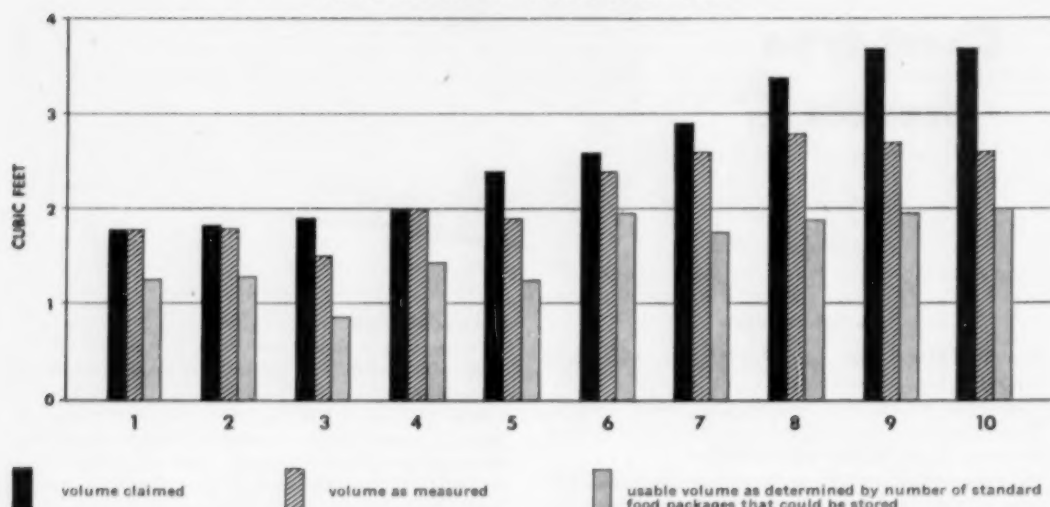
IF YOU SELECTED your combination refrigerator-freezer on the basis of the manufacturer's advertised freezer storage space, you may be surprised to learn that its actual food-holding capacity is likely to be considerably less than was claimed. Most manufacturers measure the capacity of their refrigerator-freezers by National Electrical Manufacturers Association (N.E.M.A.) standards, which, while they provide a uniform method of measuring, actually measure the air space. This space, because of odd shapes and configurations of the interior of the cabinet and the wire baskets, is of course not all usable for food storage.

To determine what might be termed the "practically usable space," CR made up a number of wooden blocks. The size of each block was the average size of a widely sold 10-ounce standard package of frozen peas and a 10-ounce package

of frozen snap beans, or  $4 \times 5\frac{1}{8} \times 1\frac{3}{8}$  inches. These blocks were fitted into each of the 10 freezers on which tests were reported in CONSUMERS' RESEARCH BULLETIN for October 1956, in such a way as to get in the largest number possible. The volume of these blocks the freezer space would actually hold was then calculated. It was found that the actual useful food storage space determined by this method ranged from about 25 to 55 percent less than that claimed by the manufacturers. The results are shown in the accompanying graph. Where the manufacturer gave the capacity of his freezer in pounds rather than in cubic feet, the capacity was converted into cubic feet on the basis that one cubic foot of frozen food is equivalent to 35 pounds, a figure—necessarily only a crude approximation—widely used for conversion of frozen food on a weight basis into cubic feet (volume).



# CAPACITIES OF FOOD FREEZERS



1 Philco L-1164  
5 Norge TC6-11

2 Wards 69-1086  
6 Philco L-1266  
9 General Electric LH-14N

3 Frigidaire CP-120-56  
7 Kelvinator K68F-12  
10 Crosley RFH-130

4 Coldspot 46-6210W  
8 Admiral CU1205P

In general, it can be said that freezer sections equipped with sliding wire baskets may be expected to have a greater discrepancy between their usable space and their claimed volume than freezers that do not have sliding baskets. In the six freezer compartments with sliding baskets, the usable space, measured by the number-of-packages-stored method, ranged from about 35 to 55 percent less than that claimed, while the usable space in the four freezer com-

partments without sliding baskets or shelves ranged from about 20 to 30 percent less than claimed. Baskets take up considerable space, and this loss of valuable freezer storage space is a price that must be paid for the convenience of sliding baskets and drawers. (Where obtaining most effective utilization of storage space is not of paramount importance, of course, the convenience of the basket devices may be well worth what it costs in diminished useful storage volume.)

## Off the editor's chest

(Continued from page 2)

of purchase where it appears that a part in the new appliance was defective. Some companies pay for the labor charge involved in replacing the defective part, others do not. Occasionally a replacement part is available f.o.b. factory, in which case you pay the freight or postage charge. Read your guarantee carefully before you call a serviceman, to see just what you are entitled to in this respect.

Sometimes the man of the household decides that he can make the repair if he can just obtain the needed part. Here he is likely to run into trouble. Appliances that are assembled on a

mass-production line pose a very different problem from the simple, accessible mechanisms of earlier days that were easy to take apart and put together again. Repair of many of today's appliances requires specialized tools and instruments, along with a drawing or diagram for each model. In fact, even a specialist in the field has complained at the time and expense involved in having to take a kitchen range apart to replace a pilot light. Poor accessibility of lamps and fuses is a common and well-justified complaint about the engineering of many modern appliances.

Those responsible for production of appliances today usually give little or no thought to the servicing and repair problems. The do-it-your-

self handy man will frequently find himself completely frustrated in making the simplest kind of repair and, frankly, some companies apparently want it that way. As the representative of one of the leading appliance manufacturers admitted to a safety meeting, several suits had been filed against his firm by people who were injured in trying to do their own repairs, and the company did its best to discourage such activities.

You may not realize it at the time, but when you make your purchase, included in the selling price is a sum around \$10 that is a kind of insurance to the dealer to compensate him for any repairs that may be needed during the warranty period. If your stove, refrigerator, washing machine, or whatnot gives him no trouble during its first year, he has made that much more profit; but then again he may lose it all on your neighbor who had a poor installation, or perhaps didn't read her directions for use and failed to follow directions properly, so that her machine has given nothing but trouble from the start. Or perhaps the product had a defect that missed the vigilant eyes of the inspector at the factory. On the other hand, you may have bought your new appliance at a discount house which waived the warranty fee and sold the machine below the customary price. Most manufacturers will supply new parts to replace any that turn out to be defective the first year, regardless of where it was purchased, but the appliance owner may be obliged to pay for the labor involved in the replacement. Where the discount house has no service facilities, it will be necessary to hire an independent serviceman to do the job, and since he has no sales of appliances to help take care of his overhead, his charges will often be somewhat higher than those of a servicing dealer.

Before your warranty runs out, you will need to think of establishing some kind of connection with a good serviceman. If you didn't make your selection of some particular make in the first place because of the good reputation of the dealer for effective, reliable servicing, start looking. There are few things in life more aggravating than an automatic washing machine that stops working in the middle of a Monday morning load, an electrical refrigerator that suddenly won't freeze ice cubes, or a television set that shows nothing but telephone poles going by when an important program is about to go on. Probably most people have not come around to the idea that a major household appliance should have preventive maintenance just as an automobile does, but it is the better part of wisdom to establish some kind of service connection

before repairs are urgently needed. One lady columnist reports that her own personal solution to the service problem is a yearly service contract on her refrigerator, home freezer, washing machine, home heating system, and air conditioner.

When you drive up to a garage and ask the mechanic to take a look at the spark plugs because the engine seems to be missing, the chances are that he will not charge you if there seems to be no trouble on that score, although one member of CR's staff was charged \$1.45 when she asked the attendant at a garage which usually handled her repairs to see what was causing a thumping noise under the hood of her car. He diagnosed it in 15 minutes as difficulty with the circulating pump. If you send for a serviceman to fix the refrigerator that isn't working and he discovers that in cleaning it someone has disconnected the floor plug, don't be surprised if he charges \$4.50-\$5 for his call. That's what the minimum house call usually comes to, whether the repair is trivial or not. It's a little like going to the doctor for a diagnosis. You pay for the examination whether or not you were really ailing, and whether or not the prescription he writes out provides relief or cures the ailment. Furthermore, if you send for a repairman and then aren't home when he arrives, he will certainly be justified in charging for his time.

After the warranty period is up, how much servicing should you expect to need? Some people complain that their TV set seems to go bad practically the day after the warranty expires. The normal life expectancy for major household appliances is around 10 years, although one designer suggests that 7 years is long enough both for safety and from the fashion viewpoint. If you pick a good make in a year when there are no "bugs" in the design, secure an appliance that was well inspected, and use the device with care according to instructions, your repair bills will likely be negligible. On the other hand, if you have a large family, of which any member may help run the washing machine, the vacuum cleaner, the air conditioner, and the television set, you run all the risks involved in the handling of a complex device by inexperienced hands with possibly even abuse of the product. In that event, you will do well to look into the matter of a yearly service contract.

Perhaps you got what is known as a "lemon," an appliance that is not quite representative of the assembly line's performance, that slipped by inspection. Then you will be in for continuous trouble unless the dealer or the distributor has been alerted by the factory to some expected

difficulty so that he is prepared to supply the needed part and replace it immediately. In the absence of item-by-item inspection, appliance manufacturers generally would do much to promote consumer goodwill if they would adopt the practice of replacing without fuss or argument any product that can clearly be demonstrated to be defective. Some companies have very good policies in such cases and often do replace obviously defective appliances. Sometimes a reluctant dealer, distributor, or company sales manager can be stimulated into taking proper action by a careful detailed description of the difficulties set forth in a letter to the president of the company, with a copy to the dealer or distributor in every case (and a copy to Consumers' Research if you'd care to send us one).

Selecting a serviceman if your dealer is not able to handle your problems satisfactorily is like venturing into an unexplored jungle. With luck you may come out all right. The publications of the Better Business Bureaus from time to time report unhappy experiences of people who paid exorbitant sums for television and home heating plant repairs without any effective results.

There are customarily two types of service facilities, the independent shop and the factory authorized or central service agencies. The independent service agencies take care of an estimated 35 percent of consumers who live outside the metropolitan area and hence are beyond the range of the centralized agencies. There are many shops that have skilled mechanics who are familiar with the maintenance and repair problems of several makes of appliances. Occasionally such shops post a schedule of their repair charges so that the consumer can get some idea of what his particular job is likely to cost. In other cases, the charge may be made on the basis of what the traffic will bear. With the independent shop, there is little that can be gained by complaining to the manufacturer when the service charge seems unduly high or the performance unsatisfactory. In extreme cases, it is sometimes helpful to report the situation by letter to the nearest Better Business Bureau or to the National Better Business Bureau where there may have been some previous record of unsatisfactory performance or high-pressure collection tactics, and an account of your own troubles will help round out the picture.

To locate a centralized or factory-authorized service shop, just look in the classified telephone directory for the name of the brand you wish taken care of, and pick the nearest one. As a rule, a telephone call will bring you a rough esti-

mate on the needed repair, assuming you know what the trouble is; otherwise ask for the rate on a call to diagnose the trouble. Expect to pay \$4 to \$5 for this service, if you're not too far from the shop. If the repair is a simple matter, the charge may be the minimum rate plus the cost of the part. Every factory-authorized service agency has a suggested list of prices for parts and repairs. If you think you are being overcharged, ask to see this price schedule.

If the appliance can't be made to work satisfactorily, write a careful account of the trouble and what has been done to remedy it, the prices charged, and the name of the repair shop to the Product Service Manager, or the National Service Department, at the home office of the manufacturer. Every big appliance manufacturer recognizes the importance of effective, prompt, reasonably-priced servicing of his product and the chances are good that your complaint will receive careful and prompt attention.

At least one company has adopted a policy of simply sending out a new appliance in the case of small items like heating pads, fans, toasters, and mixers when one goes bad during the warranty period. The customer is only out a small amount for postage, the trouble of packaging and mailing, and a short wait. In some cases, the dealer can make the exchange on the spot when the item is brought into his store. On the other hand, getting a balky washer attended to is not so simple.

Why doesn't some enterprising distributor set up a system of lending a customer a working appliance, not necessarily an automatic washer, but at least one of the conventional type that will do the laundry during the period of repair when considerable shop work or sending for needed parts is required? If that can be done with automobiles, why not for major household appliances?

In the present era of intense competition, the need for good servicing is considered so important that one big company not only set up its own standards of performance and a field organization to promulgate it, but ran a series of advertisements in several consumer magazines to tell consumers what to expect. Other manufacturers will undoubtedly be just as eager to compete for the consumer's favor. How successfully they will be able to deal with the problem remains to be seen. As we have often remarked before, check on the servicing facilities available in your locality before you pick a particular brand. No product is any better than the competence, promptness, honesty, and fairness of its local repairman.

# Ratings of Motion Pictures

THIS section aims to give critical consumers a digest of opinion from a wide range of motion picture reviews, including the motion picture trade press, leading newspapers and magazines—some 19 different periodicals in all. The motion picture ratings which follow thus do not represent the judgment of a single person, but are based on an analysis of critics' reviews.

The sources of the reviews are:

*Boxoffice, Cue, Daily News (N. Y.), The Exhibitor, Films in Review, Harrison's Reports, Joint Estimates of Current Motion Pictures, Motion Picture Herald, National Legion of Decency, Newsweek, New York Herald Tribune, New York Times, The New Yorker, Parents' Magazine, Release of the D. A. R. Preview Committee, Reviews and Ratings by the Protestant Motion Picture Council, The Tablet, Time, Variety (weekly).*

The figures preceding the title of the picture indicate the number of critics whose judgments of its entertainment values warrant a rating of A (recommended), B (intermediate), or C (not recommended).

Audience suitability is indicated by "A" for adults, "Y" for young people (14-18), and "C" for children, at the end of each line.

Descriptive abbreviations are as follows:

adv—adventure  
biog—biography  
c—in color (Anasco, Eastman, Technicolor, Trucolor, Warner Color, etc.)  
car—cartoon  
com—comedy  
cri—crime and capture of criminals  
doc—documentary  
dr—drama  
fan—fantasy  
hist—founded on historical incident  
mel—melodrama  
mus—musical  
mys—mystery  
nov—dramatization of a novel  
rom—romance  
sci—science fiction  
soc—social problem drama  
trav—travelogue  
war—dealing with the lives of people in wartime  
wes—western

A	B	C	
—	2	2	Alone in the Streets (Italian) . . . . . dr A
—	5	4	Amazon Trader, The . . . . . doc-dr A
3	8	6	Ambassador's Daughter, The . . . . . com-c A
—	—	3	Angels of Darkness (Italian) . . . . . dr A
10	4	—	Around the World in 80 Days . . . . . adv-c AYC
—	4	3	As Long As You're Near Me (German) . . . . . dr A
—	11	5	Attack . . . . . war-dr A
—	3	2	Baby Doll . . . . . dr A
—	10	6	Back from Eternity . . . . . mel A
1	7	10	Bad Seed, The . . . . . dr A
—	7	5	Bandido . . . . . mel-c A
3	2	—	Battle of Gettysburg, The . . . . . doc-c AYC
—	5	3	Beast of Hollow Mountain . . . . . sci-c AYC
—	2	7	Behind the High Wall . . . . . soc-mel A
1	14	3	Best Things in Life Are Free, The . . . . . mus-com-c AYC
—	10	3	Between Heaven and Hell . . . . . war-dr A
—	5	9	Beyond a Reasonable Doubt . . . . . mys-mel A
—	11	6	Bigger Than Life . . . . . mel A
—	5	8	Black Sleep, The . . . . . cri-mel A
—	4	6	Boss, The . . . . . cri-mel A
1	10	1	Brave One, The . . . . . dr-c AYC
—	5	3	Bullfight (Spanish) . . . . . doc A
—	10	6	Burning Hills, The . . . . . wes-c A
7	9	4	Bus Stop . . . . . dr-c A
—	5	—	Calling Homicide . . . . . cri-mel A
—	4	3	Canyon River . . . . . wes-c AYC
—	4	5	Cha-Cha-Cha-Boom . . . . . mus-com A
—	2	10	Congo Crossing . . . . . mel-c A

A	B	C	
—	2	1	Crashing Las Vegas . . . . . com A
—	4	6	Creeping Unknown, The . . . . . sci A
—	7	3	Crowded Paradise . . . . . soc-dr A
—	2	8	Cry in the Night, A . . . . . mel A
—	3	5	Curucu, Beast of the Amazon . . . . . mel-c A
—	6	1	Dakota Incident . . . . . wes-c A
—	5	3	Davy Crockett and the River Pirates . . . . . mel-c AYC
1	8	7	D-Day, the Sixth of June . . . . . war-dr-c A
—	8	3	Death of a Scoundrel . . . . . mel A
—	1	5	Desperadoes Are in Town, The . . . . . mel A
—	4	6	Doctors, The (French) . . . . . dr A
—	—	4	Dynamiters, The . . . . . cri-mel A
—	5	6	Earth vs. the Flying Saucers . . . . . sci AYC
2	11	3	Eddy Duchin Story, The . . . . . mus-biog-c AYC
—	1	5	Edge of Hell . . . . . dr A
—	4	2	Everything But the Truth . . . . . com-c AYC
2	10	5	Fastest Gun Alive, The . . . . . wes AYC
—	2	2	Fear (German) . . . . . dr A
—	6	—	Finger of Guilt (British) . . . . . mys-mel A
4	5	2	First Texan, The . . . . . biog-c AYC
—	4	4	First Traveling Saleslady, The . . . . . mus-com-c AYC
—	2	8	Flight to Hong Kong . . . . . cri-mel A
—	3	—	Forbidden Cargo (British) . . . . . mel AYC
—	7	6	Francis in the Haunted House . . . . . com AYC
6	9	3	Friendly Persuasion . . . . . dr-c AYC
—	2	6	Fruits of Summer (French) . . . . . dr A
—	2	5	Gamma People, The (British) . . . . . sci-mel A
8	5	3	Giant . . . . . dr-c AYC
—	5	8	Girl He Left Behind, The . . . . . war-com A
—	—	5	Girls in Prison . . . . . soc-mel A
—	6	6	Grand Maneuver, The (French) . . . . . dr-c A
—	2	2	Great American Pastime, The . . . . . com AYC
1	3	—	Great Man, The . . . . . dr A
—	3	6	Gun Brothers . . . . . wes A
—	1	3	Gun Slinger, The . . . . . wes-c A
—	7	3	He Laughed Last . . . . . com-c A
5	9	5	High Society . . . . . mus-com-c A
—	4	5	Hold Back the Night . . . . . war-dr A
—	4	8	Hot Cars . . . . . cri-mel A
—	1	4	Hot Rod Girl . . . . . mel A
—	5	3	Huk . . . . . mel-c AYC
—	5	1	Island of Allah . . . . . doc-c A
—	1	2	It Conquered the World . . . . . sci AYC
—	5	6	I've Lived Before . . . . . dr A
—	2	5	Jedda (Australian) . . . . . dr-c A
—	3	—	John and Julie (British) . . . . . dr-c A
—	7	8	Johnny Concho . . . . . wes A
1	6	6	Julie . . . . . cri-mel A
12	5	—	King and I, The . . . . . mus-dr-c AYC
—	5	9	Kiss Before Dying, A . . . . . cri-mel-c A
1	6	6	La Strada (Italian) . . . . . dr A
—	4	—	Last Man to Hang, The (British) . . . . . cri-mel A
—	1	2	Last of the Desperados . . . . . wes AYC
3	9	4	Last Wagon, The . . . . . wes-c AYC
3	6	6	Lisbon . . . . . mel-c A
—	3	7	Love Me Tender . . . . . wes A
5	10	2	Lust for Life . . . . . biog-c A
—	1	3	Magnificent Roughnecks, The . . . . . mel AYC
2	4	1	Magnificent Seven, The (Japanese) . . . . . dr-c A
—	7	3	Man from Del Rio . . . . . wes A
—	1	2	Man of Africa (British) . . . . . doc-dr-c A



A	B	C		
1	9	—	Marcelino (Spanish).....	dr AYC
—	14	—	Massacre.....	mel-c A
1	2	—	Men Against the Arctic.....	doc-c AYC
—	3	1	Men of Sherwood Forest (British).....	mel-c AYC
—	3	5	Miami Expose.....	cri-mel A
11	6	2	Moby Dick.....	nov-c AYC
—	2	5	Mole People, The.....	sci AYC
3	7	4	Mountain, The.....	dr-c AY
—	1	3	Naked Amazon.....	trav-c A
1	3	3	Naked Hills, The.....	mel-c AYC
—	1	4	Navy Wife.....	war-dr A
—	5	11	1984.....	fan A
—	—	5	No Place to Hide.....	dr-c A
—	7	3	Odongo (British).....	dr-c A
—	10	8	Opposite Sex, The.....	mus-com-c A
—	6	3	Papa, Mamma, The Maid and I (French).....	com A
1	10	5	Pardners.....	com-c AYC
—	3	3	Peacemaker, The.....	wes AYC
1	12	—	Phantom Horse, The (Japanese).....	dr-c AYC
—	—	3	Pharaoh's Curse.....	mys-mel A
—	12	—	Pillars of the Sky.....	mel-c A
—	6	6	Port Afrique (British).....	mel-c A
1	10	5	Power and the Prize, The.....	dr A
1	10	4	Private's Progress (British).....	war-com A
—	6	6	Proud and the Beautiful, The (French).....	dr A
1	5	11	Proud and the Profane, The.....	war-dr A
2	8	2	Proud Ones, The.....	mel-c AYC
—	4	6	Queen of Babylon, The (Italian).....	adv-c A
—	1	2	Race for Life, A (British).....	mel A
—	3	1	Rack, The.....	war-dr A
—	2	10	Raw Edge.....	wes-c A
—	8	4	Rawhide Years, The.....	mel-c A
—	5	4	Rebel in Town.....	wes-mel A
—	6	3	Reprisal.....	wes-c A
2	8	3	Riff (French).....	cri-mel A
—	1	3	Rock, Pretty Baby.....	mus-com A
—	2	4	Rumble on the Docks.....	cri-mel A
1	8	2	Run for the Sun.....	mel-c A
—	2	2	Running Target.....	mel-c A
—	7	5	Santiago.....	war-mel-c A
—	6	10	Satellite in the Sky (British).....	sci-c AYC
—	8	2	Screaming Eagles.....	war-mel AYC
—	3	6	Search for Bridey Murphy, The.....	dr A
3	7	1	Secrets of Life.....	doc-c AY
6	6	—	Secrets of the Reef.....	doc-c AYC
—	6	3	Seven Men from Now.....	wes-c AYC
4	5	2	Seven Wonders of the World.....	trav-c AYC
—	3	4	7th Cavalry, The.....	wes-mel AY
—	3	2	Shadow of Fear (British).....	mys-mel A
—	6	3	Sharkfighters, The.....	war-mel-c A
—	—	3	She-Creature, The.....	sci-mel A
—	10	3	Ship that Died of Shame, The (British).....	mel AYC
—	5	8	Showdown at Abilene.....	wes-c A
9	7	1	Silent World, The.....	doc-c AYC
—	7	5	Simon and Laura (British).....	com-c A
—	2	5	Snow was Black, The (French).....	soc-mel A
5	11	1	Solid Gold Cadillac, The.....	com-c AY
2	13	2	Somebody Up There Likes Me.....	biog A
—	4	6	Spin a Dark Web (British).....	cri-mel A
—	4	5	Stagecoach to Fury.....	wes A
—	6	6	Storm Center.....	propaganda-soc-dr A
—	—	3	Strange Adventure.....	cri-mel A
—	2	2	Strange Intruder.....	war-dr A
—	4	2	Suicide Mission (British).....	war-mel AYC
—	1	2	Swamp Women.....	cri-mel-c A
4	10	3	Tea and Sympathy.....	dr-c A
5	3	—	The House of the August doon.....	com-c AYC
—	11	3	Teenage Rebel.....	soc-dr A
8	5	2	Ten Commandments, The.....	dr-c AYC
—	6	2	Tension at Table Rock.....	wes-c A

A	B	C		
2	9	6	That Certain Feeling.....	mus-com-c A
—	7	6	These Wilder Years.....	dr A
—	5	6	Three for Jamie Dawn.....	mel A
—	2	1	Thunder Over Arizona.....	wes-c AYC
—	3	3	Thunderstorm.....	mel A
4	8	2	Toward the Unknown.....	dr-c A
—	10	2	Unguarded Moment, The.....	mel-c A
—	7	8	Vagabond King, The.....	mus-dr-c AYC
—	5	4	Vitelloni (Italian).....	dr A
1	6	7	Walk the Proud Land.....	wes-c AYC
8	9	1	War and Peace.....	dr-c AYC
2	8	1	Wee Georgie (British).....	com-c AYC
—	3	5	Werewolf, The.....	mel A
—	9	—	White Squaw, The.....	wes A
—	1	4	Wicked As They Come (British).....	dr A
—	3	5	Wild Oat, The (French).....	dr A
—	4	—	Wild Party, The.....	cri-mel A
—	2	—	Windfall in Athens (Greek).....	com AY
—	4	—	Woman of Rome (Italian).....	dr A
1	5	2	Written on the Wind.....	dr-c A
—	7	4	Yang Kwei Fei (Japanese).....	dr-c AYC
—	1	2	Yaqui Drums.....	wes AYC
—	7	3	You Can't Run Away from It.....	mus-com-c A
—	4	4	Young Guns, The.....	wes A

Reissues (oldtimers you may have seen before) as previously rated in the CR Bulletin indicated:

A	B	C		
9	9	—	Annie Get Your Gun (Nov. '50).....	mus-com-c A
1	5	9	April in Paris (June '53).....	mus-com-c A
1	5	1	Barefoot Battalion (Greek) (Dec. '54).....	war-dr AY
4	10	3	Bend of the River (Aug. '52).....	wes-c AYC
4	13	—	Big Sky, The (Feb. '53).....	wes-mel A
4	11	1	Broken Arrow (Jan. '51).....	dr-c AYC
1	11	5	Buffalo Bill (Nov. '44).....	wes-biog-c AYC
—	7	5	Carson City (Nov. '52).....	wes-mel-c AYC
4	11	1	Crash Dive (Dec. '43).....	war-mel-c AY
4	7	5	Cyrano de Bergerac (June '51).....	dr A
—	9	3	Dallas (July '51).....	wes-c A
—	8	5	Distant Drums (July '52).....	war-mel-c A
2	9	4	Flying Leathernecks (March '52).....	war-mel-c AYC
1	12	3	Guy Named Joe, A (Aug. '44).....	war-dr A
2	8	5	Halls of Montezuma (July '51).....	war-dr-c A
6	10	2	High Noon (Dec. '52).....	wes A
1	2	7	Ivanhoe (Jan. '53).....	nov-c AYC
2	13	1	Killers, The (April '47).....	cri-mel A
1	9	4	Larceny (April '49).....	mel A
—	15	1	Lusty Men, The (May '53).....	mel A
12	4	2	Mister Roberts (Dec. '55).....	war-com-c A
—	10	6	One Minute to Zero (Feb. '53).....	war-mel A
—	11	7	Rawhide (Sept. '51).....	wes A
18	—	—	Rebecca (Di. June '40).....	nov A
1	9	8	Rebel Without a Cause (June '56).....	soc-mel-c A
—	4	6	Shakedown (April '51).....	cri-mel A
—	11	5	Sleeping City, The (Jan. '51).....	cri-mel A
9	6	2	Spellbound (June '46).....	dr A
4	14	—	Stratton Story, The (Nov. '49).....	dr AYC
—	9	5	Streets of Laredo (Oct. '49).....	wes-c A
2	11	1	Tall in the Saddle (July '45).....	wes AYC
10	6	—	Taproots (March '49).....	dr-c A
—	11	3	Ten Tall Men (June '52).....	war-dr-c A
9	6	—	Third Man, The (July '50).....	cri-mel A
2	9	4	Three Musketeers (May '49).....	dr-c AY
1	13	2	To the Ends of the Earth (Sept. '48).....	doc-mel AY
1	10	4	Two Years Before the Mast (April '47).....	adv AYC
—	8	7	Unconquered (June '48).....	hist-c A
—	10	2	Walk A Crooked Mile (Apr. '49).....	mel A
1	11	5	Whispering Smith (July '49).....	mel-c AY
7	10	—	Yearling, The (May '47).....	dr-c AYC



## The Consumers' Observation Post

(Continued from page 4)

PENICILLIN RESIDUES IN MILK are considered a serious potential public health problem. That was the conclusion of a panel of medical experts called by the Food and Drug Admin. in September 1956 to evaluate the dangers and determine what action might be recommended to deal with the situation. One additional source of contact with penicillin is in the manufacture of polio vaccine where it is used to prevent bacteria overgrowth. If the vaccine comes into increasing use by adults, there may be more severe penicillin reactions. The Journal of the American Medical Association recently carried the report of a case where a nurse who was sensitive to penicillin experienced a recurrence of dermatitis when she was only present in a room with a patient who had received a penicillin injection. In another case, a person who was allergic to the drug had an unhappy reaction after working next to a girl who was sucking a penicillin lozenge. The presence of residues in milk may call for such measures as giving up milk entirely by people who have a sensitivity to the drug, since there is no way of being certain of its absence in any given source of supply at present.

\* \* \*

INDEPENDENT RADIO AND TV SERVICE SHOPS in San Francisco and Chicago have enlisted the aid of the electrical workers' union (I.B.E.W.) in keeping cutrate shops in line. Although the contract between the San Francisco TV Service Guild and the I.B.E.W. merely provides for wages and working conditions, Radio and Television News reports that the business manager of the local union has promised to rid the area of "unscrupulous" and "unfair" competitors in the service field. Management and labor are cooperating to bring about regulations requiring city and county licensing of repair technicians and the passage of key zoning ordinances in order to restrict the number of new service shops.

\* \* \*

MODERN TOILET SOAPS are generally mild and effective cleansers for most skins. In a few cases, however, even the best toilet soap will cause irritation and a sensation of excessive dryness, burning, or itching. In a test made on 200 patients suffering from dermatoses notoriously intolerant to soaps, Dr. Frederick Swanson of New York City found that nearly 85 percent showed no ill-effects whatever from the use of Dove, a neutral detergent bar made by Lever Brothers Company. The bar (Igepon A, coconut oil derived detergent) is superfatted with stearic acid but lathers well due to one of its ingredients. Dr. Swanson suggested that the better skin tolerance to Dove might be due to the neutral pH (7) of its lather as contrasted with the alkaline pH (10) of the lather of commonly used toilet soaps. Other synthetic detergent bars that are being marketed in limited areas of the United States include Zest (Procter & Gamble) and Vel Beauty Bar (Colgate Palmolive Co.). Production difficulties are reported to account for the small output of Vel Beauty Bar (mainly sulfated fatty acid monoglyceride). Zest in its early days reportedly drew some complaints of irritation, according to Chemical Week, on account of its essential ingredient lauryl sulfate or possibly from a perfume ingredient.

\* \* \*

DON'T USE A COMMERCIAL TAR REMOVER on your automobile if it is finished or refinished with one of the new acrylic lacquers. Automotive News reports that one manufacturer of a road tar remover has alerted his dealers and salesmen to warn car owners not to use his product on these new finishes. The journal also points out that any tar remover or a wax with an aromatic solvent (solvent derived from benzene or coal tar) will tend to soften the new finishes and brisk rubbing will cause damage. How you tell at the present time what wax you can safely use on your automobile is anybody's guess. One suggestion is that you try the wax on a doorjamb or some other relatively inconspicuous spot before applying it to the whole car.

TOO MUCH FAT IN THE AVERAGE AMERICAN DIET is held responsible for an alarming increase in the number of deaths due to heart disease among middle-aged men. Dr. Norman Jolliffe of New York City's Department of Health, referring to the studies at the University of Cape Town in South Africa (The Consumers' Observation Post, September 1956), pointed out that the "saturated," not the "unsaturated" fats, cause the most trouble and that the modern practice of hydrogenating fats to make them keep or give them a more desirable flavor adds more fat of the "saturated" types to the diet. Marbled beef, fluid milk consumption by adults, heat-and-serve dishes add saturated fats to the diet. To offset the effects of saturated fats on heart disease, Dr. Jolliffe suggests that Americans should get less than 30 percent of their total calories from fat and a sizable part of that should come from marine and unprocessed vegetable oil sources. Olive and peanut oils are available in the unhydrogenated state. Lean meat, non-fat milk, low-fat cheese, fried foods rarely, are recommendations of Dr. Jolliffe.

\* \* \*

HAND LOTION IN A NEW PACKAGE provides a convenient supply for the handbag that will not leak or take up much space. The brand is Balm Argenta with Lanolin (W. O. Washburn & Sons, Inc., St. Paul, Minn.). A small amount of the lotion (0.73 gram) is enclosed in a tiny aluminum foil "pillow." To release the lotion, just tear the foil, squeeze the pillow gently, and throw the foil away. The "pillows" are enclosed in a paper packet, one dozen in each. The package of 96 "pillows" (about 2-1/4 ounces usable lotion) at \$1 plus federal excise tax is considerably more expensive to use than a 10-ounce bottle of Balm Argenta also priced at \$1, plus tax.

\* \* \*

COLOR FILM ENTHUSIASTS continue to complain about the unhappy outcome--so far as consumers are concerned--of the federal government's monopoly proceedings against Eastman Kodak. The Photographic Society of America's Journal suggests to photographers who receive developed rolls of color film back from their dealers scratched and badly mounted by newcomers in the business that it is still permissible for Eastman to do the developing and mounting if the dealer sends in the order to that company. Those who wish the job done with Eastman's customary competence can insist that their rolls be sent to the firm at Rochester. One camera club has advocated that the government's decree be amended to permit Kodak to sell Kodachrome film in two ways, with and without processing included in the price. In that way the government-favored competitors of Eastman in the color processing field would have an opportunity to compete for consumers' orders on a merit basis and save cherished color rolls from being ruined by present methods.

\* \* \*

TREATMENT OF FOODS WITH ANTIBIOTICS to make them keep longer continues to increase. It is estimated that use of antibiotics on poultry amounts to something like 10 percent of national poultry production, for the very good reason--from the distributor's point of view--that treated poultry keeps twice as long as untreated birds. Canada has authorized the application of antibiotics in water and ice used on fresh-caught fish. Similar doctoring of fish, beef, pork, and even vegetables is being proposed in the U. S.

\* \* \*

THE DEVELOPMENT AND USE OF NEW INSECTICIDES may have been of tremendous benefit to agriculture in growing food more abundantly, but some of the chemicals used involve serious dangers to the health of the person who applies them and of the consumer who eats produce carrying excessive residues. The organic phosphate insecticides, such as parathion, methyl parathion, malathion, EPN, and Systox, have recently come under renewed scrutiny by the Federal Food and Drug Administration. Although official tolerances have been set for these products, permitting slight residues on food products when marketed, it has been discovered that an increase of toxicity occurred when some of the compounds were used together. In animal experiments in which it took 50 parts per million of EPN or 250 parts per million of malathion to produce noticeable adverse effects in the diet of dogs, a combination of only 20 parts per million of EPN and 100 parts per million of malathion in the diet was quite toxic to the test animal.

# Phonograph Records

BY WALTER F. GRUENINGER

Please Note: The first symbol applies to quality of interpretation, the second to fidelity of recording

**Dvorak:** *Slavonic Dances* (Op. 46 and 72) & **Smetana:** *From My Life*. Cleveland Orchestra under Szell. 4 sides, Epic SC 6015. \$7.96. This set of the attractive Slavonic dances challenges the superb Talich-conducted Urania Set C 604. There's a bit more flexibility in Talich whose fidelity very nearly equals Szell's, but in any case the differences are slight. Added value is the Szell-orchestrated version of Smetana's string quartet on Epic. . . . The new Rodzinski-conducted *Slavonic Dances* on Westminster WN 2204 seem tame, ineffectual by contrast. AA AA

**Handel:** *Solomon*. Cameron, Young, Marison, Marshall, Royal Philharmonic Orchestra and Beecham Choral Society under Beecham. 4 sides, Angel 3546-B. \$9.96. One of Handel's noble, mighty oratorios which Sir Thomas has edited and re-orchestrated. Perhaps one could find fault with a soloist's work here and there, but the loving care is evident in every phrase and the whole production is a joy to hear. Richly, transparently recorded. AA AA

**Ibert:** *Suite Symphonique* & **Rietz:** *Madrigale*. MGM Chamber Orchestra under Winograd. MGM E444. \$3.98. Clever, amusing pieces written a generation ago. Ibert's is sub-titled "Impressions of Paris"—subway, sunny park, restaurant, parade, etc. Rietz's piece is cast in a framework suggestive of archaic musical forms, but it becomes saucy ere long. Both are well played. Dry studio recording appropriate to the music. AA AA

**Mozart:** *Requiem Mass in D Minor* (K626). Philharmonic Symphony of N. Y., Westminster Choir, Seefried, Tourtel, Simonneau, Warfield, under Bruno Walter. Columbia ML 5012. \$3.98. The great *Requiem* still awaits a definitive LP release but this is the best available. The performance is subdued and flexible. Miss Tourtel's singing is less than her best and the recording of the choir is less than Columbia's best in fidelity. The choir sings well enough. In a runner-up, Krips on London LPS 230/31, released in 1950, directs an uncommon performance with boys singing the soprano and alto solo parts. Two 10-inch disks are a disadvantage. Their fidelity, however, is nearly as good as the new Columbia. . . . The new Archive ARC 3048/9 not only presents the *Mass* but the entire memorial service on the anniversary of Mozart's death at St. Stephen's Cathedral, Vienna. Recorded December 2, 1955. Included is the chanting of the priest, chimes, organ postlude, etc., and a good performance of the *Mass*. . . . The new Vox DL 270 offers the best recorded *Requiem* and Horenstein's conducting is stylish. But the new Columbia is first choice to date for the *Mass*. A A

**Puccini:** *La Bohème*. De Los Angeles, Bjoerling, Amara, etc., under Beecham. 4 sides, RCA Victor LM 6042. \$7.98. Beecham's conception rarely departs from tradition. The orchestra plays with more care and nuance than usual. But the singers tend to sing like something less than a cohesive group in style and in language, so in a manner the set is not as good as expected. De Los Angeles sings with charm and lovely tone though not with deep emotion. Bjoerling sings almost as well most of the time, though the high notes now come with some effort. Amara as Musetta is miscast. The recording suggests, here and there, motion from front to rear of stage and is wide range, rich. My admiration for the Cetra Soria Set 1237 with Cateri and Tagliavini remains undiminished and I am happy to have in my library, too, the momentous Toscanini-Victor Set LM 6006 whose fidelity suffers in comparison with Beecham's. A AA

**Rossini:** *Four Sonatas for Strings*. Solisti di Zagreb under Janigro. Vanguard VRS 488. \$4.98. Composed by Rossini in his youth. Melodic, simple, bright—bearing the germ of ideas he used later in opera. The bass viol is given several excellent solos! Superbly played by a group of 13 strings. Repeats are frequently omitted, resulting in a somewhat truncated version of the composer's conception. Fine recording up to the final chord of side two which wavers in pitch. On the whole, off the beaten path and delightful. AA A

**Strauss, R.:** *Scenes from Elektra and Salome*. Inge Borkh, Paul Schoeffler, Frances Yeend, and the Chicago Symphony under Reiner, and *Suite from Le Bourgeois Gentilhomme*, Chicago Symphony under Reiner. 4 sides, RCA Victor LM 6047. \$7.98. Highly dramatic, brutal opera music which Reiner conducts magnificently. Inge Borkh sings her altitudinous, terribly difficult part—the principal part here—with skill, cutting through the orchestra satisfactorily. But it is Reiner and the orchestra that evoke cheers. The *Suite*, which takes one side, reveals a violin soloist in one movement who is not the best and recording that ranks below the other side. AA A

**Vaughan Williams:** *Symphony No. 8* & **Butterworth:** *A Shropshire Lad* & **Bax:** *The Garden of Fand*. Hallé Orchestra under Barbirolli. Mercury MG 50115. \$3.98. Unfamiliar music to us, heard more frequently in Britain. The playing is very fine throughout. The recording lacks the brilliance of our best efforts. AA A

**Reginald Foort at the Console (organ). Cook Laboratories 1059X. \$4.98. Intermission time tunes played on the big organ at the Mosque Theater in Richmond, Va. Included are "She Didn't Say Yes," "Mood Indigo," "Valencia," "Kiss of Fire," etc. Stunning recording. AA AA**

**Verdi:** *La Traviata*. Carteri, Valletti, Warren, Rome Opera House Orchestra and Chorus under Montoux. 6 sides, RCA Victor LM 6040. \$11.98. This delicate chamber opera stands or falls on the performance of the soprano. Good as she is, Rosanna Carteri's competition from the highly dramatic, big voiced Renata Tebaldi on London LLA 26 is too formidable. The remainder of the London cast adds up to almost the equal of the Victor group. Both sets are well directed and recorded. Victor throws in a copy of *Camille* by Dumas. . . . More dramatic than the Victor set with a very good performance by Gobbi, as Papa Germont, is the new \$9.96 Angel 3545B. Antonietta Stella as Violetta takes an act to warm up and de Stefano lacks polish and ensemble. But top credit goes to Serafin who conducts with a remarkable sense of drama. Very well recorded. But overall it's London, though not by very much. A A

**Burl Ives Songs for Fun (folksinger). Decca DL 8248. \$3.98. Decca has collected some of the most delightful pieces in Burl Ives' repertory—"The Fox," "Three Jolly Huntsmen," "Eric Canal," "Blue Tail Fly," etc. Appropriately sung. The majority of these 14 pieces sound as though they were recorded in recent years but "My Good Man" sounds like a pre-LP recording. AA A**

**Marches for Twirling**. Eastman Symphonic Wind Ensemble under Fennell. Mercury MG 50113. \$3.98. Spirited playing of 12 marches ranging from "His Honor" and "U. S. Field Artillery" to "Glory of the Gridiron" and "On the Mall." Repeats are frequently omitted which cuts the playing time. That's unfortunate for there's 6 inches of empty space across the center of each side which could have taken some more music. AA AA

# Consumers' Research Bulletin

## COMING

### in the Next Issue

**CR's estimate of the relative merits of Chevrolets, Fords, and Plymouths**

Cars of all three of these makes have ample power and speed, and reasonably good riding comfort, and will serve every need for normal transportation for almost any user. However, they show important differences in safety features, general handling qualities, cornering ability, noise, and a number of other factors which will be discussed in our next Bulletin.



### in Future Bulletins

#### **Built-in gas ovens and counter top units**

Caloric, Chambers, Florence, Magic Chef, Roper, Sears, Tappan, Welbilt

#### **Vacuum cleaners**

14 makes and models—Apex, Electrolux, Eureka, General Electric, Hoover, Lewyt, Sears, Singer, Wards, Wizard

#### **1957 model automobiles**